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REPORT
OF
METROPOLITAN PARK COMMISSION

1919

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Public Document **No. 48**

REPORT

OF THE

BOARD OF METROPOLITAN PARK COMMISSIONERS

DECEMBER, 1919

BOSTON
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OFFICERS.

COMMISSIONERS.

WILLIAM B. DE LAS CASAS, *Chairman.*

ELLERTON P. WHITNEY. CHARLES S. BAXTER.

EVERETT C. BENTON. ARTHUR B. CURTIS.

SECRETARY.

GEORGE LYMAN ROGERS.

ASSISTANT SECRETARY.

WILLIAM H. GOWELL.

ENGINEER.

JOHN R. RABLIN.

OFFICES, 18 Tremont Street, Boston, Mass.

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The Commonwealth of Massachusetts

REPORT.

The Metropolitan Park Commission presents herewith its twenty-seventh annual report, being also its final report.

The most notable acquirement of the year has been that of Bunker Hill Monument and Grounds, which were transferred to the Commonwealth under authority of chapter 79 of the General Acts of the year 1919. Other slight acquirements and conveyances have been made as additions to or improvement of the alignment of the reservations and parkways. Agreement has been entered into for the purchase of two parcels of land required for completing Dedham Parkway, and also in preliminary form for an exchange of land as authorized by chapter 285 of the General Acts of 1919, which will transfer to the Commonwealth for park uses the remaining frontage on Charles River of the United States Arsenal at Watertown, and to the United States land of the Commonwealth, chiefly marsh, on Arsenal Street. This exchange of land was determined upon with some regret and only after careful consideration of all the circumstances and with advice of Frederick Law Olmstead, Jr., Landscape Architect, as a means of preserving the river front open and free from buildings. Additional buildings for the Arsenal were to be placed on the river bank where they would interrupt the continuity of park holdings and one of the best views of the river. The lands to be conveyed to the Arsenal are marsh, removed from the river 200 to 400 feet under lee of a high bank where buildings will not interrupt the proposed river driveway or the views downstream from the driveway, nor any of the attractive outlook from the driveway toward the river and upon stretches of the Speedway.

Construction of certain parkways, for which the land was acquired in previous years, has begun and is proceeding rap-

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idly and upon very favorable terms, considering that all prices for labor and supplies are higher than when the estimates were first prepared. This work has been made possible by two appropriations by the Legislature of 1919: the first, of $250,000 as an addition to Metropolitan Parks Loan, Series II; and the second, of $35,000 as a special maintenance appropriation for the improvement of parkways for which land had been previously acquired. While the acts making these appropriations contained no stipulations as to the parkways upon which the work was to be done, so that the apportionment and expenditure of the funds was left to the discretion of the Board, it was well understood that the appropriations were made in the expectation that certain well-considered projects would be carried out so far as the funds would permit in the order of opportunity and importance. The Board has endeavored to conform to this desire as far as possible, and believes that the result will be a very gratifying and useful addition to the parkways and to the public convenience which they are intended to serve. The several pieces of work entered upon may be briefly described and recommendations made in regard to them as follows: —

Extension of Mystic River driveway as a gravel-surfaced roadway along the southerly border of Mystic Lake has been completed and opened to travel. It connects with the State highway and other main highways to Lexington and Concord and to Lowell. The amount which it seemed possible to devote to this work, $11,000, was not sufficient to provide the final surfacing of stone which it is probable that the large amount of automobile travel likely to use the driveway will require in the near future. The cost of stone surfacing will be approximately $20,000.

Nonatum Parkway along the southerly side of Charles River is being extended to Maple and Jefferson streets in Newton. This will complete the Parkway from North Beacon Street in Newton, make an attractive river drive, and add to the convenience of pleasure travel between Boston and Newton and more westerly portions of the district.

The roads along the south and west borders of the westerly half of Middlesex Fells Reservation in Medford and Winches-

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ter are being improved and connected under an apportionment to this work of $25,000. They will unite in the form of a gravel roadway the west branch of Fellsway and Mystic Valley Parkway and the Whitmore Brook entrance driveway from West Medford. Even in the preliminary form of construction made possible by this amount of money, they will be suitable for a limited automobile travel, and will be a great public convenience, as uniting the parkways, shortening the distance to Winchester and Woburn, and providing a way across the great area of woodland west of Forest and Main streets in Medford, Winchester and Stoneham, through which there has heretofore been no road for automobile travel toward Winchester.

Furnace Brook Parkway is being extended from its present terminus at Adams Street to Newport Avenue in Quincy by constructing one of the two driveways indicated by the full plans for the Parkway. It will greatly relieve Adams Street and add to the safety of travel to the South Shore and other southerly points of the district and State. Adams Street, though a parkway in attractiveness, has many short curves in its course through Quincy, and, being the only highway in the line of a very great amount of travel, is overcrowded and a most hazardous highway. At the point where the Parkway crosses it there is an especially hazardous reverse curve. It is hoped that some arrangement may soon be made by which the highway may be straightened at this point, and that it will be borne in mind that such provision for public safety can never be made, so far as the acquirement of land is concerned, more economically than now. Completion of the driveway now being built will bring a large amount of travel to Newport Avenue, where it will be necessary to make a sharp turn to again reach Adams Street and pass on through overcrowded Quincy Square. It is very evident that there will almost immediately arise a demand for further extension under the railroad to Hancock Street and connection with the easterly section of the Parkway leading to Quincy Shore Reservation, and that when this is satisfied there will again arise a further demand for extension toward the southeast across the Adams estate and other open lands to the highways which give connection beyond Quincy Square with the main highway to the Fore River Works,

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Weymouth, Hingham, Nantasket and the south. Not until such extensions or some substitute for them is made will complete relief be given from the present peculiarly hazardous conditions of travel through Quincy Square.

West Roxbury Parkway was contemplated and the land secured for it in 1895 through acquirement by the Park Department of the city of Boston from the Arnold Arboretum gate at Walter Street as far as Weld Street, and by this Board from Weld Street to the Stony Brook Reservation at Washington Street. At the time of acquirement it was thought that construction would be hastened by placing all the land with the Boston Park Department. This expectation was not realized however, and in 1915 the land originally acquired by this Board was transferred back to its care. Construction of a single roadway from Anawan Avenue to Washington Street is now under way and will be completed in the spring of 1920. At Washington Street it will connect with Stony Brook Reservation roads and by them with Dedham Parkway. It will be a great improvement to the attractive West Roxbury section of Boston, to which the delay in building the Parkway has been a detriment, and a great convenience to public travel toward Hyde Park, Milton and the Blue Hills and to Dedham. It will, undoubtedly, lead to an early and just demand for extension to the Arboretum, where, by Walter Street and Weld Street, it will give connection with Jamaicaway and Fenway into the heart of Boston.

Winthrop Parkway from Revere Beach toward Winthrop was built some years since to a connection with Leverett Avenue, near the seashore of the Beachmont section of Revere. Subsequently, an inroad of the ocean cut off this outlet, since which time the Parkway has had no outlet to the south and has been almost useless. This was regrettable, not only because of the increased expense of the work to be done when restoration should be begun, but because acquirement of a large part of the land and removal of the buildings between Beachmont Hill and Winthrop Highlands had opened a most attractive ocean view which shabby buildings had previously interrupted, and so made a continuous driveway from Revere Beach all the more desirable. Connection between the Parkway and the

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highway is now being restored and protected from further washouts by a concrete sea wall. A recent storm, however, has made new inroads upon the shore further along behind the houses upon Beachmont Hill, and threatened their safety, and at a point beyond washed away the sidewalk of the highway. It is evident that the sea wall now being built must be extended in some form around the bluff at Beachmont if further washing away of the hill is to be averted, and that it will be a saving toward the cost of this work if the remaining properties between the highway and the ocean are acquired before the owners enter upon the expense of building separate pieces of wall which very likely might lack unity of design or adequate strength. If these properties can be obtained at reasonable prices, it may be well to abandon the design of carrying the Parkway outside the bluff, and make a saving in cost by constructing the wall as a tow wall protecting the hill rather than as a sea wall outside the Parkway, which would pay the cost of acquiring the properties on the hill. The highway might then, with some repair, serve for many years at least the need of a parkway. The properties to be acquired on the hill and as far as Winthrop Highlands have an assessed value of approximately $53,000.

The November storm which caused the damage last stated to the highway at Beachmont also caused a considerable amount of damage to previously constructed work at various points upon the shore, especially at Winthrop, at Revere and at Quincy Shore. Temporary clearing and repair of damage has been made, but as the larger items of repair could not be foreseen and were not included in the estimates for maintenance for 1920, which of necessity were filed before the storm occurred, the Board recommends a special item of appropriation of maintenance for these purposes of $15,000.

By chapter 190 of the Special Acts of 1919, acquirement of land and protecting easements along the westerly side of Mystic Lake was authorized. It has not as yet been possible to take any action toward carrying out the purpose of this act, but it is hoped that something may be accomplished in this direction in the coming year if funds are then available.

The gift of Bunker Hill Monument and Grounds has brought

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not only the usual obligation for maintenance which comes with every new park acquirement, but an especial obligation to preserve and care for it as a monument and grounds symbolizing the richest historical associations of this Commonwealth and of the entire country. The appropriation of $6,000 for maintenance during the year 1919 would have been wholly inadequate to provide for an entire year. The property was acquired July 22, 1919, and the amount available was sufficient for only the most immediately necessary cleaning and caring for the buildings and policing the grounds for the rest of the year. Both monument and grounds had suffered in late years from lack of funds available for their care in the hands of the Trustees of the Monument Association, and it will be necessary to provide an amount sufficient for restoration to good condition as preliminary to a normal maintenance cost. The masonry of the entire monument needs repointing. The fences surrounding the 4 acres of ground and surrounding the monument are out of alignment and in need of repainting. The concrete walks are broken and unsightly; the steps leading up the embankment need resetting and repointing; the slopes of the embankment are gullied by rain and by being tramped over in many directions; the drains are choked up. A simple but adequate plan for restoration of monument and grounds to a proper condition has been prepared by the Engineer of the Board in consultation with Frederick Law Olmstead, Jr., Landscape Architect. This plan may be carried out at a cost not exceeding $35,000, and a special appropriation of that amount, in addition to the annual appropriation for maintenance, is recommended. With the appropriation and expenditure of this amount, it will be possible to maintain the monument and grounds at a normal annual expense. The monument was reopened to the public without charge for admission, but as it soon became apparent that free admission led to abuses, the nominal charge of 10 cents for admission was restored with satisfactory results.

The bath-houses at Revere, Nahant and Nantasket Beaches have been maintained since they were built by the fees charged for use of their privileges. These fees have been less than those charged generally for even inferior accommodations at other public and private bath-houses, but have usually been

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sufficient to provide for all operating expenses and maintain a reserve for repairs and renewals. Increased cost of labor and supplies, however, has made the expense of operation greater than the receipts during the past few years, and therefore has drawn upon the reserve for repairs and renewals. If the bath-houses are to continue to be self-supporting, it will probably be necessary to increase the fees for their use, and in the near future to recommend an appropriation for more extensive repairs in the nature of gradual rebuilding of all wooden portions of the buildings and for some alterations and enlargements necessary to provide for increased use.

The gypsy moth continues to be a very serious menace to the Blue Hills Reservation. This reservation contains 4,700 acres, and even with its many miles of roads and paths has areas to which it is very difficult to extend the spraying. It has but one pond of any size, and there is practically no opportunity to sink wells for certainty of water supply. The swamp holes in the valleys between the hills usually dry up by the first of July and earlier when there is a dry spring and summer such as that of the year 1919. Experience makes it evident that spraying must be done rapidly before the water holes have dried up, and more extensively than heretofore. To make this possible during the year 1920, a considerably increased appropriation is necessary and has been included in the estimates for this year. During the past year the destruction of trees by the chestnut-tree blight became so serious as to be beyond the ability of the forces of the Reservation to remove while they yet had commercial value. For this reason it was deemed best to dispose of them for removal by contract, thus making it possible to start reforesting at the earliest possible time within the areas from which the trees are removed.

The rebuilding of Neponset Bridge was authorized by chapter 300 of the Acts of the year 1915. The old bridge has been removed and a temporary bridge completed and in use, as stated in the report for 1918. Plans for the permanent bridge are practically complete, and it is expected that the work of construction may be begun next year.

The lighting of the parkways and of the public roads in the reservations which are used at night is not what it ought to be, and is inferior to that of the highways of adjoining cities and

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towns because of the cost and of the inferior quality of naphtha for the Welsbach lamps generally in use. It has now become more expensive and less effective than electric lighting would be. During the war it was impossible to substitute electric lighting, but the electric light companies are now in position to make ten-year contracts for such substitution at a less cost than that for effective lighting by the Welsbach system. Installation of poles and wires underground, where necessary, and overhead where such installation will not be objectionable, will, however, require a large part of the coming season, even if contracts are made in the near future. It will, therefore, be necessary to continue the present Welsbach system at a considerably increased cost over that of the previous year, and an increase over the estimates submitted for lighting must be provided.

The Constitutional Convention of 1918 required the following Legislature to consolidate the State departments, boards and commissions into twenty departments. The Legislature of 1919, in pursuance of this requirement, enacted chapter 350 of the General Acts of that year, in which, because of an apparent uncertainty as to whether the metropolitan boards were State departments within the meaning of the requirement of the convention, it also provided for transfer of the work of the Metropolitan Water and Sewerage Board and of the Metropolitan Park Commission to a Metropolitan District Commission, to consist of a single commissioner and four advisory commissioners, such consolidation to take effect on Dec. 1, 1919, and that at this date the several previous boards should be abolished. This report is, therefore, the final report of the Metropolitan Park Commission.

The Board has accordingly shaped its work during the past year so as to facilitate the transfer of all property in its charge and all work and other transactions being carried on by it to the Metropolitan District Commission in such form that the work may be taken up and carried on without delay or inconvenience. It is, of course, obvious that certain features of this report, such as the statement of finances, may not be completed until after December 1. These will be included, however, with the report, and will furnish the usual information. As a matter of possible convenience there is also included with this report a brief résumé of some interesting facts in the

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history and accomplishments of the past twenty-eight years which are scattered through previous reports.

The Metropolitan Park System was recommended by a preliminary commission, appointed under chapter 342 of the Acts of 1892, in a report to the Legislature of 1893. This preliminary commission consisted of Charles Francis Adams as Chairman and Philip A. Chase and William B. de las Casas as associate members. It was assisted by Sylvester Baxter as Secretary, Charles Eliot as Landscape Architect, Conrad Reno as attorney, and Miss Mary V. Habberley as clerk. Acting upon the report of this Board, the Legislature, by chapter 407 of the Acts of 1893, authorized a Metropolitan Parks District of Boston and thirty-six surrounding cities and towns and a Metropolitan Park Commission of five members, to acquire, maintain and make available to the inhabitants of the District open spaces for exercise and recreation. Adequate powers, including that of appointing and maintaining a police force, and with an initial appropriation of $1,000,000 were given. The permanent Board, as first appointed, included the members of the preliminary commission and Abraham L. Richards and James Jeffrey Roche. In its subsequent history, the Board has included only twelve other members. The term of service of each has been as follows: —

Charles Francis Adams, July 14, 1892, to June, 1895.
Philip A. Chase, July 14, 1892, to May, 1896.
William B. de las Casas, July 19, 1892, to Dec. 1, 1919.
James Jeffrey Roche, July 14, 1893, to Dec. 4, 1893.
Abraham L. Richards, July 21, 1893, to March, 1898.
William L. Chase, March 5, 1894, to Oct. 7, 1895.
Augustus Hemenway, June 24, 1895, to May, 1898.
Edwin B. Haskell, Dec. 13, 1895, to March 24, 1907.
Edwin U. Curtis, May 14, 1896, to Oct. 1, 1897; May 26, 1898, to Dec. 24, 1918.
Thomas L. Livermore, Oct. 6, 1897, to January, 1899.
Forrest C. Manchester, March 16, 1898, to January, 1899.
David N. Skillings, Jan. 6, 1899, to Aug. 24, 1914.
Ellerton P. Whitney, Feb. 6, 1899, to Dec. 1, 1919.
Everett C. Benton, April 2, 1907, to Dec. 1, 1919.
Charles J. Barton, Aug. 24, 1914, to May 7, 1919.
Charles S. Baxter, Jan. 13, 1919, to Dec. 1, 1919.
Arthur B. Curtis, May 7, 1919, to Dec. 1, 1919.

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Mr. Adams was Chairman until June, 1895. Mr. de las Casas has been Chairman continuously since that date. The Secretaries to the Board have been Herbert S. Carruth, until Jan. 1, 1896; John Woodbury, until Jan. 15, 1911; and George Lyman Rogers from that date. The legal assistants have been: —

Edgar J. Rich.	Robert S. Barlow.
John Woodbury.	Edward B. Adams.
Frederick S. Goodwin.	Stanley M. Bolster.
Geo. Lyman Rogers.	Paul M. Hubbard.
Louis A. Frothingham.	Woodbury Rand.
Philip S. Parker.	

Since 1896 these have been appointed by authority of the Attorney-General. The Chief Engineer was William T. Pierce until 1903, and John R. Rablin since that time. The purchasing agent of the Board is William H. Gowell, who, beginning as an office boy, became a clerk, and has been in charge of purchasing since April 1, 1906. Among the clerical assistants of the office, two clerks have served so long as to deserve mention: Miss Mary V. Habberley, from and including the time of the preliminary commission; and Miss Alice Edson, since Jan. 25, 1895. The landscape architects advisory to the Board have been Charles Eliot, Frederick Law Olmsted, Jr., and occasionally others for special work. The architects have been William Downes Austin for buildings generally, and Wheelwright, Haven & Hoyt and Haven & Hoyt for bridges. The general oversight of administration and outside work has been exercised through subcommittees of the Board, and the Secretary of the Board has been the Executive Officer, through whom all orders of the Board have been issued to the superintendents of the several divisions into which the reservations and parkways and their administration have been divided. Since Jan. 1, 1899, the Chairman of the Board has devoted all his time to the work, thus being able to maintain a direct contact with all departments of the work, both within the office and without. The outside divisions have been: Beaver Brook, Blue Hills, Stony Brook, Middlesex Fells, Revere Beach, Charles River — Speedway and Riverside Sections — and Nantasket Beach. Charles River Division, since the building of the dam, has been

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divided into Charles River Upper Division and Charles River Lower Division. Beaver Brook has been added to Charles River Upper Division. Stony Brook has been added to Blue Hills Division. As acquirements and construction have increased, they have been assigned for care and administration to one or another of these several divisions. The superintendents of the divisions, as they now stand, are: Blue Hills Division, B. J. Costello; Middlesex Fells Division, Albert N. Habberley; Charles River Upper Division, John L. Gilman; Charles River Division, Lower Basin, Herbert W. West; Revere Beach Division, Herbert W. West; Nantasket Beach Division, Elmer E. Bickford. Beaver Brook was under Robert Elder, now retired, as superintendent, until Oct. 1, 1916. Stony Brook was under Charles P. Price until he became superintendent of Middlesex Fells, and under Albert N. Habberley until he was transferred to Charles River, Riverside Section, from which he was transferred to Middlesex Fells to succeed Mr. Price, resigned. Charles River, including the Speedway, has been in charge of John L. Gilman since 1900. Revere Beach has been in charge of Herbert W. West since its acquirement, May 1, 1896. Middlesex Fells was in charge of Charles P. Price from July, 1896, to April, 1908, and since then in charge of Albert N. Habberley. Nantasket was in charge of John L. Gilman one season, of Moody Leighton until his death, June 4, 1910, and since then in charge of Elmer E. Bickford. Blue Hills was in charge of Frank Dings until his death, April 15, 1905, and since then in charge of B. J. Costello.

The police, appointed from the civil service list by direct examination and selection of the entire Board, have been under a subcommittee of the Board. In recent years, Superintendent West has been acting superintendent of police. The superintendents of the several reservations are appointed members of the police force with the rank of captain. The administrative work of the Board is carried on through a general office, which was located for a short time in the Ames Building at the corner of Court and Washington streets, and from September, 1898, to January, 1917, at 14 Beacon Street in the Congregational Building, and since that time at 18 Tremont Street in the Kimball Building. It includes the Department of Records,

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Files and Plans, Miss Grace A. Soule, chief clerk, with three assistants; Law and Claims Department, at present without an attorney, Miss Alice Edson as clerk; the Purchasing Department, William H. Gowell and four clerks; the Accounting and Pay Roll Department, Miss Mary V. Habberley and five clerks; the Engineering Department, John R. Rablin, Chief Engineer, with one assistant engineer and other assistants and four clerks. The outside work is administered by the superintendents with an average number of 240 foremen and other permanent employees, and such additional help temporarily employed from time to time as the work of the various seasons may require. The drawbridges, locks and dams are under supervision of the Engineering Department. The police force, consisting of 28 superior officers and 155 patrolmen at the present time, are assigned according to necessity to the several divisions under the superintendent in charge, and are transferred from time to time in such way as to give them familiarity with all locations and branches of the work. In addition to their ordinary work, detachments have been sent by request of the Governor from time to time for police assistance in various cities and towns of the Commonwealth in time of special emergency, such as strikes.

The legislation authorizing the establishment of the Metropolitan Parks required apportionment of their cost every five years by a special commission to be appointed by the Supreme Court, and repayment according to the table of percentages thus established by the cities and towns of the Metropolitan Parks District. The bonds of the Commonwealth issued in the first instance have been generally for periods of forty years. This legislation has been supplemented by chapter 288 of the Acts of 1894, which specifically authorized the acquirement and construction of parkways or boulevards and apportionment of their cost, one-half to the Metropolitan Parks District and one-half to the entire State. The acquirement and maintenance of Nantasket Beach was specifically authorized by chapter 464 of the Acts of 1899 and its cost apportioned to the cities and towns of the District, with Cohasset added. Charles River dam and locks and embankment were specifically provided for by chapter 465 of the Acts of 1903, and their cost specifically

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apportioned as therein provided. Wellington Bridge was acquired and rebuilt under an act apportioning its cost partly upon the District and partly upon the cities and towns which had maintained the previous bridge. Other bridges and construction work of importance have been occasionally delegated to this Board by specific legislation and the cost apportioned in a specific manner. These include Mattapan Bridge; Boylston Street Bridge, Newton Upper Falls; Weston Bridge; Anderson Memorial Bridge; North Beacon Street Bridge; and Neponset Bridge, for which the temporary bridge has been built and plans prepared for the permanent bridge, construction of which may begin next year. The funds appropriated for acquirement and construction have been made under the several acts above specified and occasional special acts. They now amount to $9,248,497.76 under the original park act, chapter 407 of the Acts of 1893; $7,293,914.16 under the parkway act, chapter 288 of the Acts of 1894; $705,881.50 under the Nantasket Beach act, chapter 464 of the Acts of 1899; $4,509,368.91 under the Charles River Basin dam and embankment act, chapter 465 of the Acts of 1903; a total of $21,757,662.33. Maintenance is provided for by annual appropriations taxed and paid each year under provision of the several acts according to the table of percentages established by the Apportionment Commission.

The acquirements thus far made for Metropolitan Parks aggregate 10,627 acres, of which 7,400 acres are in woodland, 13.08 miles in seashore, 56.65 miles measured by both banks in river front, 45.42 miles in parkways and 59.55 miles of formal roadways, 54.07 miles of wood roads, and many more miles of wood paths have been constructed and are maintained. Included with these acquirements, or since constructed and retained for administration and public convenience, are 220 buildings of an aggregate cost or appraisal of over $1,250,000. These include three large public bath-houses, several small bath-houses, the hotel and incidental pavilions and small buildings at Nantasket, boat houses, comfort stations, the great group of recreation buildings at Riverside, Charles River, and several refectories. The street lights number 1,440, the sea walls about 4 miles, the bridges 41, culverts 32, dams 8, locks, sluices and tide gates 82, and police signal lines of 62 miles.

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The work of the Board during the period of its existence has included many special reports, and determining the line of acquirements, negotiations and making the acquirements, constructing roads and structures, and protecting and assisting the public in the use of the reservations and parkways. It has at all times been a work requiring a wide range of study and consideration for, and contact with, public authorities of the State and of the several cities and towns of the District and with the public generally. It is believed that the organization of the work and of working forces has been adapted to the work in hand, that the work is now carried on in a high state of efficiency and faithfulness, and that expenditures have been made carefully and without waste, and that the property now in the care of the Board and about to be transferred would greatly exceed, upon fair appraisal of present value, its original cost. The Metropolitan Park System is the largest and most varied system in this country, and from many points of view the most varied and immediately useful of any park system in the world.

With this brief summary of its work, the Board takes opportunity to express its sincere appreciation of the consideration and trust extended to it at all times by the authorities of the State and the several cities and towns of the District, and by the public generally, and of the faithfulness and sincere spirit of co-operation which has generally been manifested by its advisers and assistants and employees, all of which has done more than can be expressed to give to the work in which all have been deeply interested the measure of success which has been attained.

The usual incidental reports and other information will accompany this report.

All of which is respectfully submitted.

WILLIAM B. DE LAS CASAS,
ELLERTON P. WHITNEY,
EVERETT C. BENTON,
CHAS. S. BAXTER,
ARTHUR B. CURTIS,
Metropolitan Park Commission.

DECEMBER, 1919.

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REPORT OF THE ENGINEER.

Hon. JAMES A. BAILEY, *Commissioner, Metropolitan District Commission.*

SIR: — I submit herewith the report of the Engineer for the year ending Nov. 30, 1919, as follows: —

As previously reported, several men left the Engineering Department to enter the service for the war or to accept employment in war work. Of those who entered the service, seven in number, all except one have returned and been reinstated in their former positions. With these and some additional assistants, made necessary by the increased amount of work, the force has been restored to about normal.

Chapter 175 of the General Acts of 1919 appropriated $250,000 for the purpose of completing the construction of boulevards and reservation roads already authorized by law. Under this act the following construction work was contracted for and begun; Mystic Valley Parkway Extension along the southerly shore of Lower Mystic Lake; West Roxbury Parkway; Nonantum Road Extension in Charles River Reservation, Newton; Furnace Brook Parkway Extension, Quincy; Winthrop Parkway Extension, shore protection; and the improvement of the South Border Road, Middlesex Fells Reservation. Other items of construction work in progress during the year have been the finishing of the fender piers of the temporary Neponset Bridge and relocation of main water and gas pipes on the temporary bridge and the continuation of the filling of Old Colony Parkway with ashes collected by the city of Boston contractor.

The work of revising the plans for the permanent Neponset River Bridge, made necessary by changes in design and in width required, has been in progress, and it is expected to call for bids about the first of next year. The estimated cost of the new permanent bridge and approaches is $450,000.

The extreme high tides and severe storm of Nov. 6 to 9, 1919,

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did considerable damage to the shore reservations, principally at Winthrop. The estimated cost to repair these damages is $17,895, and work has been commenced to make the most necessary repairs immediately, to prevent further damage during the winter months.

The Engineering Department has continued in direct charge of the maintenance and operation of locks and drawbridges and has directed and supervised the maintenance and repairs of all bridges, highways and structures under the care and control of the Commission.

The department has supervised and inspected the work done under 120 permits issued to cities, towns, corporations and individuals for work in the parkways and reservations.

Surveys for land plans and surveys, estimates and all preliminary investigations incidental to construction and maintenance have been made by this department.

The cost of conducting the department has been as follows: —

Engineering: —		
Construction: —		
Services,	$11,627 43	
Expenses,	2,493 77	
		$14,121 20
Maintenance: —		
Services,	$21,008 74	
Expenses,	3,889 10	
		24,897 84
Total,		$39,019 04

The following is a detailed list of the work done under the direction of the Engineering Department.

Parkways.

Alewife Brook Parkway.

Plans of land in Somerville and Cambridge to be conveyed by the West End Street Railway Company to the Commonwealth.

Resurfacing of portion of roadway transferred by city of Somerville to Metropolitan Park Commission, 4,926 square yards of bituminous macadam at a total cost of $7,709.96.

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Blue Hills Parkway.

Construction of concrete surface on easterly walk from Mattapan Bridge to Eliot Street, 348 square yards at $2.61 per square yard, $908.28. Work was done by Warren Brothers Company under the same terms as contract No. 220, dated Oct. 1, 1919.

Resurfacing of roadways at Canton Avenue Circle and of portions of Canton Avenue under care of Metropolitan Park Commission, 3,693 square yards of bituminous macadam at $1.18 per square yard, $4,357.74.

Dedham Parkway.

Plans and estimates of cost to finish construction.

Plans of land to be conveyed by Messrs. Tierney and Mullen to the Commonwealth to complete the Parkway through to East Dedham.

Work of construction on easterly end at junction with Stony Brook Reservation is in progress by the forces of the division.

Furnace Brook Parkway.

Plans and estimates of cost of construction of section from Adams Street to Newport Avenue, Quincy. Work of construction of this section was begun on Sept. 30, 1919, and is now in progress. Thirteen bids were received on Sept. 10, 1919, and contract No. 217, dated Sept. 15, 1919, was made with Coleman Brothers, the lowest bidders, for the estimated sum of $33,398.75.

Lynnway.

Considerable repair work on Saugus River Bridge in cutting down and splicing decayed pile tops, and on floor of drawbridge. Also rearrangement of operating machinery of drawbridge.

Concrete surfacing of easterly sidewalk from Point of Pines Station to halfway between Lancaster Avenue and Whitton Avenue, 483.8 square yards at $2.52 per square yard, $1,219.18. Work was done by Warren Brothers Company under contract No. 220, dated Oct. 1, 1919.

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Middlesex Fells Parkway.

Repair work on Wellington Bridge in cutting down and splicing decayed pile tops and painting of fences and steel work of drawbridge.

Concrete surfacing of section of easterly or traffic road from northerly end to junction with Revere Beach Parkway. Work was done under contract No. 219, dated Oct. 1, 1919, with A. G. Tomasello, 1,412 square yards at $3.50 per square yard, $4,942.

Construction plans and estimates for retaining wall extension from bridge abutment to Somerville Bath-house.

Mystic Valley Parkway.

Construction plans and estimates for parkway extension around southerly end of Lower Mystic Lake from Medford Street to Mystic Street, Arlington.

Work of grading and building temporary surfacing on this section has been done under contract No. 218, dated Aug. 15, 1919, with A. G. Tomasello. Cost of the work was $10,876.01. Road opened to public travel on Nov. 13, 1919.

The floor system of the Aberjona River Bridge, Winchester, has been entirely rebuilt. The steel work was done by the Boston Bridge Works and the wood work by the forces of the division. Total cost was $3,365.18.

A section of the roadway southerly from Aberjona River Bridge, 1,500 feet in length, has been resurfaced with bituminous macadam by the forces of the division, 6,000 square yards, at a total cost of $7,733.02.

Old Colony Parkway.

Preliminary estimates of cost of construction.

Work of filling with ashes and rubbish by the Boston Development and Sanitary Company under contracts Nos. 205 and 210 has been in progress during the year; 21,721 cubic yards have been put in place at a cost of 9 cents per cubic yard, and 69,334.39 cubic yards at a cost of 15 cents per cubic yard.

Work of revising plans, specifications and estimates for the

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proposed permanent Neponset Bridge to conform to change in width and design has been in progress.

Work of constructing fender piers of temporary bridge, completion of water and gas pipe siphon and removal of old bridge has been completed.

Pilgrim Highway.

Studies, estimates and report for proposed Pilgrim Highway through Quincy have been made in co-operation with the Engineer of the Massachusetts Highway Commission.

Revere Beach Parkway.

Work of painting steel bridges done under contract with Charles MacMasters.

Work of repairs to Malden River Bridge in cutting off and splicing decayed pile tops and painting steel work.

Work of changing grades and resurfacing section at junction with Everett Avenue, Everett, done by the forces of the division.

Concrete walks have been built in several sections of the Parkway by the forces of the division; 3,816.21 square yards have been laid at a total cost of $8,689.40.

West Roxbury Parkway.

Construction plans, specifications and estimates of the Parkway from Washington Street to Center Street, including bridge over New York, New Haven & Hartford Railroad, have been prepared.

Work of construction of section from Washington Street to Belgrade Avenue was begun Sept. 5, 1919, and is now in progress. Eight bids were received on Aug. 27, 1919, and contract No. 215, dated Sept. 3, 1919, was made with Rowe Contracting Company, the lowest bidders, for the estimated sum of $40,201.

Winthrop Parkway.

Construction plans, specifications and estimates for shore protection and filling, Winthrop Parkway Extension to Endicott Street, Revere.

Work of construction of concrete sea wall for shore protection was begun Sept. 16, 1919, and is now in progress. Nine

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bids were received on Sept. 10, 1919, and contract No. 216 was made with Coleman Brothers, the lowest bidders, for the estimated sum of $52,950.

Reservations.

Bunker Hill Monument.

Surveys, plans, studies and estimates of cost for work of restoring to proper and sightly condition the monument and surrounding park area have been made in co-operation with the Landscape Architect.

Charles River Reservation, Lower Basin Section.

Wooden temporary bridge over Bullard's Creek on the southerly side of Charles River near Western Avenue has been built. Work was done by Hugh Nawn Contracting Company at a total cost of $6,936.32.

Preliminary estimates of cost of construction of roads along the southerly bank of the river from North Harvard Street to Essex Street have been made.

Soundings and estimates of amount of shoaling in Lechmere and Broad Canals have been made.

Charles River Reservation, Upper Division.

Construction plans and estimates for changes and repairs to swimming pool and for new pump house at Riverside Recreation Grounds. Work on pool done by the forces of the division. Pump house was built by Archdeacon & Sullivan. Circulation pump and pipes for swimming pool have been installed and drainage pumps moved to location in new house. Work of installing motors, electric power lines and equipment is in progress.

Construction plans, specifications and estimates for building Nonantum Road Extension to Maple Street, Newton. Work of construction is now in progress. Seven bids were received on Aug. 20, 1919, and contract No. 214, dated Aug. 28, 1919, was made with A. G. Tomasello, the lowest bidder, for the estimated sum of $40,904.

Section of road through United States Arsenal grounds, closed during war, has been repaired and opened to public travel.

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Plan of exchange of land with Ætna Mills.

Plans of land to be conveyed to city of Newton for bathhouse purposes.

Plans of lands to be exchanged by United States War Department and Commonwealth near the United States Arsenal.

Lynn Shore Reservation.

Repairs have been made to Lynn Shore sea wall. Work was done by Coleman Brothers; cost, $4,765.66.

Construction of concrete surface on sections of westerly sidewalk from Nahant Street to Deer Cove, 748 square yards, at $2.61 per square yard, $1,952.28. Work was done by Warren Brothers Company under contract No. 220, dated Oct. 1, 1919.

Middlesex Fells Reservation.

Estimates of cost of widening and improving South Border Road.

Plans and estimates for Wright Memorial Outlook on Pine Hill.

Resurfacing of a section of Woodland Road with bituminous macadam. Work was done by the forces of the division.

Plans of land to be conveyed to town of Winchester.

Nantasket Beach Reservation.

Plans and estimates of extensions of sea walls.

Sewers have been laid through the section along the pavilion and hotel.

Concrete and brick wall has been built along the automobile parking space southerly from the hotel.

Work of building new store buildings to replace old shanties at corner of Nantasket Avenue and steamboat landing is in progress.

Revere Beach Reservation.

Construction plans and estimates for concrete shore protection from Shirley Avenue to Chester Avenue.

Construction plans of enclosed shelters and for park seats.

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Winthrop Shore Reservation.

Work of repairs of damage to sea walls, sidewalks, roadways and fences by storm and extreme high tides of Nov. 6 to 9, 1919, is in progress. Work is being done by Coleman Brothers.

Drawbridges and Locks.

Charles River Dam. — The usual work necessary for the care, maintenance and operation of the locks, sluices and drawbridge at Charles River Dam has been done under the direction and supervision of this department.

Only two bids could be obtained for breaking ice in the channels and canals of the Basin during the winter season of 1918–19. Each was estimated to amount to about $30,000. A boat suitable for the purpose was found which could be purchased for the sum of $10,500. The cost of repairs and operation for the winter season was $6,177.36; total cost, $16,677.36. This shows an actual saving, from the amounts of the only bids possible to obtain, of about $13,322.64.

Repairs have been made to Wellington, Saugus River and Malden River Bridges as noted under "Parkways," and the work of maintenance and operation of these and the temporary Neponset River Bridge and Cradock Lock have been under the direction and supervision of this department.

The following is a record of the traffic through the locks and drawbridges during the year: —

Charles River Dam and Locks.

Main Lock.

Number of openings,	2,455
Number of vessels,	2,313
Number of boats,	1,415
Lumber (feet B. M.),	1,379,000
Sand (tons),	109,212
Granite (tons),	1,915
Coal (tons),	193,047
Gravel (tons),	62,370
Oil (barrels),	237,800
Stone, rubble (tons),	4,875
Piles,	2,325
Miscellaneous (tons),	1,300

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Small Boat Lock.

Number of openings,	1,083
Number of boats,	1,523

There were 1,736 drawbridge openings.

WELLINGTON BRIDGE.

Number of openings,	158
Number of vessels,	252

MALDEN RIVER BRIDGE.

Number of openings,	371
Number of vessels,	692

SAUGUS RIVER BRIDGE.

Number of openings,	218
Number of vessels,	317

CRADOCK LOCK.

Number of openings,	754
Number of boats,	973
Number of boats over rollway,	87

TEMPORARY NEPONSET BRIDGE.

Number of openings,	270
Number of vessels,	393
Number of boats,	61

GENERAL.

The work of surfacing sidewalks in the various divisions with concrete has been extended as far as funds would permit and a much needed improvement has resulted. This work should be continued.

The Welsbach Street Lighting Company of America, whose contract for lighting the parkways and reservations by naphtha and gas lamps expired Dec. 1, 1919, has given notice that on account of the increased cost of labor and materials it does not wish to renew the contract for the naphtha lamps.

For the past three years the advisability of replacing the naphtha lamps with an electric lighting system has been investigated from time to time by this department and reported to and considered by the Commission. On account of the Commission's lack of authority to make long-term contracts at first,

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and later on account of war conditions, no satisfactory arrangements could be made with the electric companies.

If the lighting of the parkways and reservations is to be continued, it now becomes necessary to install some other system to replace the naphtha lamps, and further investigations of this matter are now in progress.

The following tables are appended to this report: —

TABLE 1. — Data relating to Metropolitan Park System.
TABLE 2. — Summary of cost of road repairs and maintenance.

Respectfully submitted,

JOHN R. RABLIN,
Director of Park Engineering.

DEC. 1, 1919.

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TABLE 1. — DATA RELATING TO METROPOLITAN PARK SYSTEM.

Areas of Reservations and Parkways.

	Acres.	
Reservations: —		
Blue Hills,	4,906.43	
Bunker Hill,	6.05	
Middlesex Fells,	1,845.77	
Stony Brook,	463.72	
Beaver Brook,	58.33	
Hart's Hill,	22.97	
Hemlock Gorge,	23.06	
Charles River,	711.28	
Mystic River,	54.23	
Neponset River,	922.59	
King's Beach and Lynn Shore,	22.69	
Revere Beach,	64.99	
Winthrop Shore,	16.83	
Quincy Shore,	32.91	
Nantasket Beach,	25.59	
Total,		9,177.44
Parkways: —		
Hammond Pond,	183.69	
Blue Hills,	83.58	
Old Colony,	55.20	
Woburn,	23.24	
Middlesex Fells,	82.12	
Revere Beach,	126.89	
Mystic Valley,	337.89	
Neponset River,	74.11	
Fresh Pond,	12.40	
Lynn Fells,	7.72	
Furnace Brook,	101.25	
Nahant Beach,	81.98	
Lynnway,	5.15	
Winthrop,	8.04	
Dedham,	35.87	
Alewife Brook,	144.53	
West Roxbury,	72.37	
Quannapowitt,	13.47	
Total,		1,449.50
Grand total, reservations and parkways,		10,626.94

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Lengths of Formal Roads constructed.

	Double Roadways (Miles)	Single Roadways (Miles).	Total (Miles).
Reservations: —			
Charles River,	–	4.87	
Lynn Shore,	–	.96	
Quincy Shore,	–	2.24	
Revere Beach,	–	2.70	
Stony Brook,	–	2.34	
Winthrop Shore,	–	1.07	
			14.18
Parkways: —			
Alewife Brook,	–	.70	
Blue Hills,	1.46	1.61	
Fresh Pond,	–	.50	
Furnace Brook,	–	3.24	
Lynn Fells,	–	1.05	
Lynnway,	–	.68	
Middlesex Fells,	4.10	1.77	
Mystic Valley,	–	6.17	
Nahant Beach,	–	.50	
Neponset River,	–	.53	
Revere Beach,	1.45	3.73	
Winthrop,	–	.49	
Woburn,	–	1.38	
			22.35
	7.01*		
* Equivalent in miles of single roadway,			14.02

	Miles.	
Highways transferred by or taken from cities and towns: —		
Alewife Brook Parkway,	.44	
Blue Hills Reservation,	1.23	
Middlesex Fells Reservation,	6.63	
Nantasket Beach Reservation,	.71	
		9.01
Grand total,		59.56

All above roads open to automobile traffic.

Lengths of Carriage Roads in Reservations.

	Miles.
Blue Hills Reservation,	30.93
Middlesex Fells Reservation,	17.85
Stony Brook Reservation,	1.60
Beaver Brook Reservation,	.22
Charles River Reservation,	3.70
Total,	54.30

Of the above roads 10.19 miles are open to automobile traffic.

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Lights in Parkways and Reservations.	Lights.
Alewife Brook Parkway (Welsbach naphtha),	16
Alewife Brook Parkway (arc lights),	7
Blue Hills Parkway (Welsbach gas),	80
Charles River Reservation, Upper Division, along the Speedway, Arsenal Road and North Beacon Street to Watertown (Welsbach naphtha),	[1] 69
Charles River Reservation, Upper Division, along Nonantum Road (Welsbach gas),	19
Charles River Reservation, Boston Embankment (electric),	106
Charles River Reservation, Lower Basin, Dam and Lock (electric),	15
Fresh Pond Parkway (electric),	15
Furnace Brook Parkway (Welsbach gas),	86
Lynn Fells Parkway (Welsbach naphtha),	33
Lynn Shore Reservation (electric),	28
Lynnway (electric),	17
Middlesex Fells Parkway (Welsbach naphtha),	261
Middlesex Fells Reservation (Welsbach naphtha),	41
Middlesex Fells Reservation (electric),	48
Mystic Valley Parkway (Welsbach naphtha),	160
Nahant Beach Parkway (electric),	[2] 7
Nantasket Beach Reservation (electric),	[3,4] 24
Old Colony Parkway (arc),	3
Quincy Shore Reservation (Welsbach gas),	78
Quincy Shore Reservation (electric),	2
Revere Beach Parkway (Welsbach naphtha),	169
Revere Beach Parkway (electric),	1
Revere Beach Parkway (arc),	2
Revere Beach Reservation (Welsbach naphtha),	2
Revere Beach Reservation (Welsbach gas),	53
Revere Beach Reservation (electric),	[5] 36
Winthrop Parkway (Welsbach naphtha),	11
Winthrop Shore Reservation (electric),	7
Woburn Parkway (Welsbach naphtha),	31
Total,	1,427

[1] Three electric lights in yard at administration building.
[2] Five additional lights in summer.
[3] Twenty additional lights in summer.
[4] Three additional lights in summer south of bath-house, near wall.
[5] Three hundred and ninety-five additional lights in summer.

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Miles of Seashore.

	Miles.
Lynn Shore,	1.50
Nahant Beach,	3.92
Revere Beach,	2.74
Winthrop Shore,	1.71
Nantasket Beach,	1.02
Quincy Shore,	2.19
Total,	13.08

Lengths of Sea Walls.

	Miles.
Lynn Shore,	1.30
Revere Beach at Northern Circle,	.08
Revere Beach at Eliot Circle,	.15
Revere Beach, shore protection, bath-house shelter to Revere Street shelter,	.29
Revere Beach, shore protection, south of Northern Circle,	.28
Winthrop Shore, bridge to Great Head,	1.04
Winthrop Shore, bridge to Grover's Cliff,	.23
Quincy Shore Reservation, southerly end,	.15
Nantasket Beach Reservation,	.43
Winthrop Parkway, near Leverett Avenue, Revere,	.05
Total,	4.00

Miles of River Bank.

	Miles.
Charles River,	28.13
Mystic River,	8.16
Neponset River,	15.86
Alewife Brook,	4.50
Total,	56.65

Bridges.

Reinforced concrete bridges,	11
Steel bridges,	8
Wooden bridges,	[1] 5
Drawbridges,	6
Footbridges,	12
Total,	42

Culverts.

Reinforced concrete and other masonry culverts,	35

[1] One-half of Wellington Bridge rebuilt with concrete girders.

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Dams.

Beaver Brook Reservation, small wooden dams,	2
Charles River Reservation, Charles River Basin Tidal Dam, 1,200 feet in length,	1
Charles River Reservation, small stone dam in branch below Washington Street, Newton Lower Falls,	1
Charles River Reservation, reinforced concrete dam at Washington Street, Newton Lower Falls, 200 feet in length,	1
Hemlock Gorge Reservation, small reinforced concrete dam on East Branch of river, Newton Upper Falls,	1
Hemlock Gorge Reservation, reinforced concrete dam in Charles River at Boylston Street, Newton Upper Falls, 90 feet in length,	1
Mystic River Reservation, reinforced concrete tidal dam at Cradock Bridge, 100 feet in length; weirs, 400 feet in length,	1
Total,	8

Lock-gates, Sluice-gates and Tide-gates.

Charles River Reservation, Charles River Basin Tidal Dam, 6 lock-gates, 13 sluice-gates, 43 tide-gates.

Mystic River Reservation, Cradock Bridge Tidal Dam, 2 lock-gates, 4 sluice-gates, 8 tide-gates.

Quincy Shore Reservation, 8 tide-gates.

Revere Beach Parkway, 1 tide-gate.

Police Signal System.

	Miles.
Blue Hills Division,	30½
Middlesex Fells Division,	18¼
Nantasket Beach Division,	2½
Charles River Reservation,	10
Fresh Pond Parkway,	½
Total,	61¾

Revere Beach Division Police Signal System, serving 11 miles of parkways and reservations, and Middlesex Fells Division, serving 1½ miles of parkway, on wires leased from the New England Telephone and Telegraph Company. Two miles of wire in Blue Hills Reservation leased from the New England Telephone and Telegraph Company.

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Buildings.

	Hammond Pond Parkway.	Blue Hills.	Middlesex Fells.	Revere Beach.	Charles River Reservation.		Nantasket Beach.	Beaver Brook.	Totals.
					Lower Basin.	Upper Division.			
Police stations,	–	1	1	2	–	2	1	–	7
Substations,	1	5	2	3	2	1	–	–	14
Separate work, headquarters,	–	–	1	1	–	–	–	–	2
Stables,	–	5	3	2	1	3	1	1	16
Superintendents' houses,	–	1	–	1	–	2	–	1	5
Dwellings,	–	10	6	–	–	4	2	–	22
Garages,	–	4	1	2	1	1	1	–	10
Carpenter shops,	–	1	1	1	–	1	–	–	4
Paint shops,	–	–	1	1	1	–	1	–	4
Other shops,	–	–	3	2	–	4	1	–	10
Sheds,	–	2	6	3	1	–	–	–	12
Miscellaneous,	–	2	12	4	5	4	5	2	34
Band stands,	–	1	3	3	1	8	1	1	18
Shelters,	–	1	1	4	1	1	1	1	10
Refectories,	–	2	–	–	1	–	1	–	4
Hotel,	–	–	–	–	–	–	1	–	1
Sanitaries,	–	3	6	2	1	4	7	1	24
Boathouses,	–	–	–	1	1	6	–	–	8
Bath-houses,	–	3	2	2	–	3	1	–	11
Laundries,	–	–	–	1	–	–	1	–	2
Coal bin,	–	–	–	–	–	–	1	–	1
									219

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TABLE 2. — SUMMARY OF COST OF ROAD REPAIRS AND MAINTENANCE, 1919.

PARKWAY OR RESERVATION.	Length (Feet).	Width of Roadway (Feet).	Square Yards.	Cost per Square Yard in Detail.						Total Amount.	Remarks.	Location.
				Labor (Cents).	Broken Stone (Cents).	Bituminous Binder or Dust Layer.			Total Cost (Cents).			
						Kind of Material.	Gallons per Square Yard.	Cost (Cents).				
Alewife Brook Parkway,	992	38–41	4,926	50.13	56.64	Standard Binder "A" (Standard Oil Company).	1.99	19.90	126.67	$6,239 19	Reconstruction,	Powder House Boulevard (near ball field), Somerville.
Blue Hills Parkway,	2,500	32	8,890	3.49	–	Asphaltic Oil No. 6 (Standard Oil Company).	.27	2.00	5.49	486 40	Surface treatment,	Blue Hills Parkway Extension to Harland Street, Milton.
Blue Hills Parkway,	–[1]	–[1]	3,693	56.00	46.53	Standard Binder A and B,	1.44	15.07	117.60	4,342 32	Reconstruction,	At circle, Canton Avenue, Milton.
Blue Hills Parkway,	5,000	24	13,333	2.81	–	Asphaltic Oil No. 6,	.18	1.32	4.13	551 11	Surface treatment,	Eliot Street to Canton Avenue, Westerly Roadway, Milton.
Blue Hills Reservation,	6,500	16	11,555	2.63	–	Asphaltic Oil No. 6,	.21	1.53	4.16	480 68	Surface treatment,	North Border Road, Hillside Street to Randolph Avenue, Milton and Quincy.
Blue Hills Reservation,	6,500	16	11,555	2.84	–	Asphaltic Oil No. 6,	.21	1.53	4.37	504 64	Surface treatment,	Hillside Street, Milton.
Blue Hills Reservation,	4,000	19	8,445	5.50	–	Asphaltic Oil No. 6,	.48	3.50	9.00	758 87	Surface treatment,	Unquity Road, Milton.
Blue Hills Reservation,	800	16	1,422	2.77	–	Asphaltic Oil No. 6,	.28	2.07	4.84	68 78	Surface treatment,	Harland Street, Milton.
Blue Hills Reservation,	7,000	16	12,445	2.35	–	Asphaltic Oil No. 6,	.21	1.54	3.89	483 27	Surface treatment,	Administration Road, section 3, Milton and Quincy.
Blue Hills Reservation,	6,800	16	12,090	2.54	–	Asphaltic Oil No. 6,	.20	1.46	4.00	482 68	Surface treatment,	Wampatuck Road, Quincy.
Furnace Brook Parkway,	7,700	32	27,155	.31	–	Asphaltic Oil No. 6,	.15	1.08	1.39	378 60	Surface treatment,	Adams Street to Blue Hills Reservation, Quincy.
Middlesex Fells Reservation,	1,440	22	3,520	50.64	37.45	Standard Binder "A",	2.12	21.20	109.29	3,845 81	Reconstruction,	Washington Street, Pond Street to Ravine Road, Stoneham.

[1] Varying.

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TABLE 2. — SUMMARY OF COST OF ROAD REPAIRS AND MAINTENANCE, 1919 — *Concluded.*

PARKWAY OR RESERVATION.	Length (Feet).	Width of Roadway (Feet).	Square Yards.	Cost per Square Yard in Detail.						Total Amount.	Remarks.	Location.
				Labor (Cents).	Broken Stone (Cents).	Bituminous Binder or Dust Layer.			Total Cost (Cents).			
						Kind of Material.	Gallons per Square Yard.	Cost (Cents).				
Middlesex Fells Reservation,	1,625	26	4,694	45.58	50.95	Standard Binder "A", .	1.30	13.00	109.53	$5,141 75	Reconstruction, .	Main Street, North of Bear Hill Road, Stoneham.
Mystic Valley Parkway, .	1,500	36	6,000	48.76	59.31	Standard Binder "A", .	1.26	12.60	120.67	7,239 10	Reconstruction, .	Southerly from Aberjona River Bridge, Winchester.
Nantasket Beach Reservation.	3,760	40	16,711	8.10	6.85	Tarvia "B" (Barrett Manufacturing Company).	1.90	2.00	16.95	2,831 87	Surface treatment,	Nantasket Avenue, Hull.
Neponset River Parkway, .	2,750	26	7,944	.55	–	Asphaltic Oil No. 6, .	.23	1.54	2.09	166 07	Surface treatment,	Blue Hill Avenue to Brush Hill Road, Milton.
Quincy Shore Reservation, .	12,040	24–40	39,076	2.05	–	Tarine No. 1 (American Tar Company).	.28	3.24	5.29	2,065 91	Surface treatment,	Hancock Street to Fenno Street, Quincy.
Revere Beach Parkway, .	220	–[1]	1,618	51.00[2]	67.35	Tarvia X and Tarine No. 2.	2.90	31.85	150.20	2,430 41	Reconstruction, .	Easterly from Everett Avenue, Everett and Chelsea.
Revere Beach Parkway, .	1,550	26	4,617	2.375	3.22	Tarine No. 1, . .	.433	4.765	10.36	478 38	Surface treatment,	Traffic Road, Washington Avenue to Webster Avenue, Chelsea.
Revere Beach Parkway, .	3,045	36	12,180	.958	2.69	Tarine No. 1, . .	.246	2.71	6.36	774 48	Surface treatment,	Broadway to Second Street and Second Street to Vine Street, Northerly Roadway, Everett.
Stony Brook Reservation, .	4,100	16	7,290	4.23	–	Asphaltic Oil No. 6, .	.33	2.42	6.65	484 64	Surface treatment,	Border Road, Boston.
Stony Brook Reservation, .	3,000	8[3]	2,667	9.28	–	Asphaltic Oil No. 6, .	.52	3.86	13.14	350 47	Surface treatment,	Turtle Pond Road, Boston.

[1] Varying. [2] Includes raising loam spaces, edgestones and catch basins. [3] Full width of road not treated.

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FINANCIAL STATEMENT.

Loan Appropriations.

The appropriations heretofore made in the form of loans, with accretions thereto, are as follows: —

Metropolitan Parks Loan Fund.

Original appropriation, chapter 407, Acts of 1893,	$1,000,000 00
General appropriation, chapter 483, Acts of 1894,	500,000 00
Charles River Act, chapter 509, Acts of 1894,	300,000 00
General appropriation, chapter 305, Acts of 1895,	500,000 00
General appropriation, chapter 466, Acts of 1896,	1,000,000 00
General appropriation, chapter 464, Acts of 1897,	500,000 00
General appropriation, chapter 530, Acts of 1898,	1,000,000 00
Revere Beach Bath-house Act, chapter 142, Acts of 1899,	125,000 00
General appropriation, chapter 406, Acts of 1899,	300,000 00
Charles River Improvement Act, chapter 465, Acts of 1900,	50,000 00
Fuller's Wharf Act, chapter 467, Acts of 1900,	30,000 00
General appropriation, chapter 445, Acts of 1901,	450,000 00
Mystic River Bridge Act, chapter 492, Acts of 1901,	200,000 00
General appropriation, chapter 290, Acts of 1903,	125,000 00
Newton Upper Falls Bridge Act, chapter 391, Acts of 1903,	40,000 00
Continuing appropriation, chapter 429, Acts of 1903,	1,500,000 00
Nahant Beach Bath-house Act, chapter 326, Acts of 1904,	70,000 00
Reimbursing loan for moth expense, chapter 486, Acts of 1906,	50,000 00
Purification of Mystic River, Alewife Brook and adjacent water-courses, ponds and drainage areas, chapter 529, Acts of 1906,	100,000 00
Additional appropriation for purification of Mystic River, etc., chapter 529, Acts of 1907,	25,000 00
Mystic River and Winthrop Shore Act, chapter 652, Acts of 1908,	70,000 00
Charles River Land Act, chapter 628, Acts of 1910, and chapter 439, Acts of 1911,	99,554 95

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Alewife Brook Purification Act, chapter 458, Acts of 1911,	$15,000 00
Work for unemployed, chapter 4, General Acts of 1915,	50,000 00
Weston Bridge Act, chapter 368, Special Acts of 1915,	50,000 00
	$8,149,554 95
To provide for interest and sinking fund requirements to 1900, chapter 311, Acts of 1897,	900,000 00
Total amount of loans,	$9,049,554 95
Amounts received from sales of buildings, receipts from bath-houses, fines, etc.,	198,942 81
Total,	$9,248,497 76

METROPOLITAN PARKS LOAN FUND, SERIES II.

Original boulevard, chapter 288, Acts of 1894,	$500,000 00
General appropriation, chapter 472, Acts of 1896,	500,000 00
General appropriation, chapter 521, Acts of 1897,	1,000,000 00
Saugus Bridge Act, chapter 547, Acts of 1898,	100,000 00
General appropriation, chapter 428, Acts of 1899,	500,000 00
Mattapan Bridge Act, chapter 443, Acts of 1900,	75,000 00
Winchester Act, chapter 444, Acts of 1900,	50,000 00
Revere Beach Parkway Act, chapter 445, Acts of 1900,	200,000 00
General appropriation, chapter 172, Acts of 1902,	450,000 00
General appropriation, chapter 359, Acts of 1903,	110,000 00
Continuing appropriation, chapter 419, Acts of 1903,	1,500,000 00
Alewife Brook and Fresh Pond Parkway Act, chapter 651, Acts of 1908,	50,000 00
Continuing appropriation, chapter 699, Acts of 1912,	1,000,000 00
Wellington Bridge Act, chapter 794, Acts of 1914,	115,000 00
Work for unemployed, chapter 5, Special Acts of 1915,	50,000 00
Alewife Brook Parkway construction, chapter 243, General Acts of 1915,	35,000 00
Neponset Bridge Act, chapter 300, General Acts of 1915,	350,000 00
Wellington Bridge Act, chapter 178, General Acts of 1916,	11,000 00
Improvement of lands in Arlington, chapter 186, General Acts of 1916,	20,000 00
Parkway connecting Blue Hills Reservation and Granite Street, Braintree, chapter 235, General Acts of 1916,	10,000 00
Construction of Dedham Parkway, chapter 237, General Acts of 1916,	10,000 00
Additional appropriation for Neponset Bridge construction, chapter 220, General Acts of 1917,	100,000 00
Settlement of claims for land, Furnace Brook Parkway, chapter 316, General Acts of 1917,	8,000 00

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Completion of boulevards and roadways, chapter 175, General Acts of 1919,	$250,000 00
Additional appropriation for Neponset Bridge construction, chapter 238, General Acts of 1919,	170,000 00
	$7,164,000 00
To provide for interest and sinking fund requirements to 1900, chapter 311, Acts of 1917,	100,000 00
Total amount of loans,	$7,264,000 00
Receipts from sales, etc.,	36,123 82
Total,	$7,300,123 82

NANTASKET BEACH LOAN.

Appropriation, chapter 464, Acts of 1899,	$600,000 00
Appropriation, chapter 456, Acts of 1901,	100,000 00
Total amount of loans,	$700,000 00
Receipts from rents, etc.,	5,881 50
Total,	$705,881 50

CHARLES RIVER BASIN LOAN.

Bonds issued for 1904,	$250,000 00
Bonds issued for 1905,	400,000 00
Bonds issued for 1906,	600,000 00
Bonds issued for 1907,	1,150,000 00
Bonds issued for 1908,	400,000 00
Bonds issued for 1909,	850,000 00
Bonds issued for 1910,	475,000 00
Bonds issued for 1911,	300,000 00
Appropriation, chapter 539, Acts of 1913,	40,000 00
Driveway, Brooks Street to Charlesbank Road, chapter 188, General Acts of 1915,	35,000 00
Total amount of bonds,	$4,500,000 00
Receipts added to loan,	9,368 91
Total,	$4,509,368 91

EXPENDITURES FROM LOANS.

The following tables show the total amount expended in each of the foregoing loans, the total cost of each reservation and parkway to Dec. 1, 1919, and the amount charged by the

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Auditor's department to meet the sinking fund and interest requirements previous to Jan. 1, 1900. The item of "Miscellaneous" in these tables includes cost of construction of roads, buildings and of all other work of construction, and all other charges against these loans except those for land, general expenses, sinking fund and cost of maintenance required by law to be charged to loans up to 1897. The total charges for maintenance to 1897, general expenses and sinking fund are given separately at the end of the tables. The amounts expended from these loans for the fiscal year ending Nov. 30, 1919, are stated in tables on pages 49 to 51. The total amounts charged to those loans are as follows: —

METROPOLITAN PARKS LOAN FUND.

Land,	$5,392,798 66
Miscellaneous, including construction of roads, buildings, etc.,	3,394,831 79
General expense,	163,371 12
Maintenance to Jan. 1, 1897, sinking fund assessments to Jan. 1, 1900, and interest,	290,326 56
Transfer to Serial Bond Loan,	3,601 10
	$9,244,929 23

METROPOLITAN PARKS LOAN FUND, SERIES II.

Land,	$2,272,903 39
Miscellaneous, including construction of roads, buildings, etc.,	3,999,118 09
General expense,	107,090 19
Sinking fund assessments to Jan. 1, 1900, and one-half interest,	59,195 89
	$6,438,307 56

NANTASKET BEACH LOAN.

Land,	$603,329 57
Miscellaneous, including construction of buildings, etc.,	102,551 93
	$705,881 50

EXPENDITURES TO DEC. 1, 1919.

METROPOLITAN PARKS LOAN FUND.

Blue Hills Reservation: —		
Land,	$363,357 29	
Miscellaneous,	307,058 66	
		$670,415 95

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Middlesex Fells Reservation: —		
Land,	$691,162 69	
Miscellaneous,	294,557 47	
		$985,720 16
Revere Beach Reservation: —		
Land,	$1,162,947 67	
Miscellaneous,	800,999 04	
		1,963,946 71
Stony Brook Reservation: —		
Land,	$281,243 87	
Miscellaneous,	76,810 67	
		358,054 54
Beaver Brook Reservation: —		
Land,	$29,819 29	
Miscellaneous,	24,437 35	
		54,256 64
Hemlock Gorge Reservation: —		
Land,	$53,254 00	
Miscellaneous,	15,543 94	
		68,797 94
Charles River Reservation: —		
Land,	$1,569,391 51	
Miscellaneous,	340,471 43	
		1,909,862 94
Neponset River Reservation: —		
Land,	$233,473 04	
Miscellaneous,	46,418 97	
		279,892 01
Mystic River Reservation: —		
Land,	$242,883 21	
Miscellaneous,	380,815 51	
		623,698 72
Lynn Shore Reservation: —		
Land,	$361,199 29	
Miscellaneous,	243,580 01	
		604,779 30
Quincy Shore Reservation: —		
Land,	$73,726 26	
Miscellaneous,	198,160 63	
		271,886 89
Winthrop Shore Reservation: —		
Land,	$51,067 32	
Miscellaneous,	170,560 99	
		221,628 31

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Hart's Hill Reservation: —		
Land,	$10,000 00	
Miscellaneous,	202 35	
		$10,202 35
King's Beach Reservation: —		
Land,	$24,297 21	
Miscellaneous,	1,551 63	
		25,848 84
West Roxbury Parkway: —		
Land,	$244,976 01	
Miscellaneous,	8,313 67	
		253,289 68
Wellington Bridge: —		
Miscellaneous,	$185,317 42	
		185,317 42
Nahant Beach Bath-house: —		
Miscellaneous,	$67,794 58	
		67,794 58
Boylston Street Bridge: —		
Miscellaneous,	$45,838 57	
		45,838 57
Alewife Brook Purification: —		
Miscellaneous,	$136,398 90	
		136,398 90
Weston Bridge: —		
Miscellaneous,	$50,000 00	
		50,000 00
General expense,		163,371 12
		$8,951,001 57
Sinking fund requirements to 1896,	$18,980 18	
Care and maintenance to July 1, 1896,	85,813 46	
Care and maintenance, July 1, 1896, to Jan. 1, 1897,	19,604 06	
Sinking fund assessment for 1897,	63,630 70	
Sinking fund assessment for 1898,	9,755 55	
Sinking fund assessment for 1899,	64,224 00	
Interest,	28,318 61	
Transfer to Serial Bond Loan (unexpended balance Alewife Brook purification appropriation),	3,601 10	
		293,927 66
Total charged to Dec. 1, 1919,		$9,244,929 23
Balance Dec. 1, 1919,		3,568 53
		$9,248,497 76

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METROPOLITAN PARKS LOAN FUND, SERIES II.

Blue Hills Parkway: —		
Land,	$133,505 02	
Miscellaneous,	269,513 47	
		$403,018 49
Middlesex Fells Parkway: —		
Land,	$263,687 60	
Miscellaneous,	613,667 39	
		877,354 99
Mystic Valley Parkway: —		
Land,	$203,990 91	
Miscellaneous,	425,422 56	
		629,413 47
Revere Beach Parkway: —		
Land,	$537,445 51	
Miscellaneous,	869,565 65	
		1,407,011 16
Neponset River Parkway: —		
Land,	$83,941 75	
Miscellaneous,	36,100 54	
		120,042 29
Fresh Pond Parkway: —		
Land,	$44,086 25	
Miscellaneous,	31,635 58	
		75,721 83
Furnace Brook Parkway: —		
Land,	$173,897 77	
Miscellaneous,	240,785 45	
		414,683 22
Nahant Beach Parkway: —		
Land,	$80,940 78	
Miscellaneous,	76,014 13	
		156,954 91
Lynn Fells Parkway: —		
Land,	$40,468 46	
Miscellaneous,	126,373 84	
		166,842 30
Winthrop Parkway: —		
Land,	$132,915 73	
Miscellaneous,	71,830 38	
		204,746 11
Alewife Brook Parkway: —		
Land,	$144,497 74	
Miscellaneous,	45,705 13	
		190,202 87

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Charles River Speedway: —		
Miscellaneous,	$521,348 66	
		$521,348 66
Blue Hills roads: —		
Miscellaneous,	$8,742 06	
		8,742 06
Middlesex Fells roads: —		
Miscellaneous,	$64,863 53	
		64,863 53
Stony Brook roads: —		
Miscellaneous,	$37,183 45	
		37,183 45
Lynnway: —		
Land,	$20,500 00	
Miscellaneous,	124,368 29	
		144,868 29
Spy Pond Parkway: —		
Miscellaneous,	$89 04	
		89 04
Old Colony Parkway: —		
Land,	$296,949 26	
Miscellaneous,	70,996 52	
		367,945 78
Woburn Parkway: —		
Land,	$3,958 75	
Miscellaneous,	52,038 32	
		55,997 07
Dedham Parkway: —		
Land,	$10,527 01	
Miscellaneous,	22,692 47	
		33,219 48
Hammond Pond Parkway: —		
Land,	$94,965 85	
Miscellaneous,	5,061 45	
		100,027 30
Quannapowitt Parkway: —		
Land,	$6,625 00	
Miscellaneous,	1,831 82	
		8,456 82
West Roxbury Parkway: —		
Miscellaneous,	$4,784 93	
		4,784 93

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Vose's Grove: —		
Miscellaneous,	$980 08	
		$980 08
Wellington Bridge: —		
Miscellaneous,	$120,796 40	
		120,796 40
Neponset Bridge: —		
Miscellaneous,	$150,109 57	
		150,109 57
Arlington Parkway: —		
Miscellaneous,	$4,035 12	
		4,035 12
Nonantum Road: —		
Miscellaneous,	$1,192 41	
		1,192 41
West Street, Braintree: —		
Miscellaneous,	$1,389 85	
		1,389 85
General expense,		107,090 19
		$6,379,111 67
Sinking fund requirements for 1896,	$3,650 03	
Sinking fund requirements for 1897,	14,057 10	
Sinking fund requirements for 1898,	3,765 08	
Sinking fund requirements for 1899,	15,396 00	
One-half interest,	22,327 68	
		59,195 89
Total charged to Dec. 1, 1919,		$6,438,307 56
Balance Dec. 1, 1919,		861,816 26
		$7,300,123 82

NANTASKET BEACH LOAN.

Land,	$603,329 57
Miscellaneous,	102,551 93
Total charged to Dec. 1, 1919,	$705,881 50

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Charles River Basin Loan.

Expended from beginning of work to Dec. 1, 1919,		$4,472,747 22

The above amount has been distributed as follows: —

Administration,	$108,110 16	
Dam,	1,118,772 60	
Lock,	724,142 64	
Temporary bridge and approaches,	184,895 36	
Drawbridge,	100,371 06	
Highway,	55,557 85	
Dredging, pile-driving and protection work in Basin,	179,881 35	
Broad Canal,	117,251 64	
Lechmere Canal,	53,388 87	
Boston Embankment,	895,213 92	
Boston Marginal Conduit,	635,511 96	
Cambridge Marginal Conduit,	99,472 48	
Elinination of malarial mosquitoes,	1,173 68	
Landing piers,	7,667 99	
Float anchorage,	23 90	
Police signal system,	9,847 56	
Improvement of south bank and driveway,	31,506 09	
Service sheds,	19,198 95	
Mortuary,	1,560 66	
Otter Street widening,	34,762 82	
Landing near Faneuil Station,	1,057 83	
Alterations and improvements in stable and stable yard,	2,052 15	
Shelters,	2,615 19	
Rent of land,	2 00	
Maintenance,	88,708 51	
		$4,472,747 22

Metropolitan Parks Trust Fund.

Receipts,	$40,168 23	
Expenditures,	38,084 25	
Balance Dec. 1, 1919,		$2,083 98

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Detailed Statement.

Expenditures, Dec. 1, 1918, to Dec. 1, 1919.

Metropolitan Parks Loan Fund.

Metropolitan Parks Loan Fund,	$9,049,554 95
Receipts added to loan before June 1, 1901,	198,942 81
	$9,248,497 76
Expenditures to Dec. 1, 1919,	9,244,929 13
Balance,	$3,568 63

Metropolitan Parks Loan Fund, Series II.

Metropolitan Parks Loan Fund, Series II,	$7,264,000 00
Receipts from sales, etc.,	36,123 82
	$7,300,123 82

Expenditures.

Mystic Valley Parkway: —				
Construction: —				
Contract, A. G. Tomasello,		$1,041 25		
Engineering: —				
Services,	$539 06			
Expenses,	2 24			
		541 30		
			$1,582 55	
Furnace Brook Parkway: —				
Engineering: —				
Services,	$633 06			
Expenses,	40			
		$633 46		
Advertising and printing contract,		267 40		
			900 86	
Winthrop Parkway: —				
Construction: —				
Contract, Coleman Brothers,		$15,988 50		
Engineering: —				
Services,	$989 82			
Expenses,	42 13			
		1,031 95		
Legal,		65 00		
Advertising and printing contract,		221 55		
			17,307 00	
Middlesex Fells Roads: —				
Construction: —				
Labor and material,		$3,379 85		
			3,379 85	
Old Colony Parkway: —				
Land,		$14,358 73		
Filling material,		10,046 98		
Engineering: —				
Services,	$2,079 04			
Expenses,	380 87			
		2,459 91		
Legal.		3,732 65		
Claims,		2,830 00		
			33,428 27	
Amounts carried forward,			$56,598 53	$7,300,123 82

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Amounts brought forward,				$56,598 53	$7,300,123 82
Dedham Parkway: —					
Engineering: —					
Services,		$85 05			
			$85 05		
Claims,			55 00		
				140 05	
West Roxbury Parkway: —					
Construction: —					
Contract, Rowe Contracting Company,			$3,247 00		
Engineering: —					
Services,		$1,057 19			
Expenses,		33 35			
			1,090 54		
Advertising and printing contract,			247 97		
				4,585 51	
Neponset Bridge: —					
Construction: —					
Contracts: —					
Hugh Nawn Contracting Company,	$9,051 19				
Bay State Dredging Company,	4,833 26				
William L. Miller Company,	2,697 00				
		$16,581 45			
Labor and materials,		22,164 47			
Siphon,		3,718 57			
			$42,464 49		
Engineering: —					
Services,		$2,767 28			
Expenses,		497 31			
			3,264 59		
Drawtenders,			8,245 86		
Rental of land,			500 00		
Advertising,			333 75		
Lighting,			218 75		
Shifting lamp pole,			53 41		
				55,080 85	
Nonantum Road: —					
Engineering: —					
Services,		$913 04			
Expenses,		27 05			
			$940 09		
Advertising and printing contract,			252 32		
				1,192 41	
				$117,597 35	
Amounts charged to Dec. 1, 1918,				6,320,710 21	
					6,438,307 56
Balance,					$861,816 26

North Beacon Street Bridge Loan.

Chapter 780, Acts of 1914,	$175,000 00
Amounts charged to Dec. 1, 1918,	174,853 50
Balance,	$146 50

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Charles River Basin Loan.

Total amount of loan,			$4,500,000 00
Receipts added to loan,			9,368 91
			$4,509,368 91
Expenditures.			
Administration,	$50 00		
Shelters,	943 19		
Rent of land,	1 00		
		$994 19	
Amounts charged to Dec. 1, 1918,		4,471,753 03	
			4,472,747 22
Balance,			$36,621 69

Metropolitan Parks System Maintenance.

Appropriation Dec. 1, 1918, to Dec. 1, 1919,					$596,000 00
Expenditures.					
General expense: —					
Police: —					
Pay rolls,	$157,833 54				
Miscellaneous,	21,071 53				
		$178,905 07			
Salaries: —					
Commissioners,	$3,450 00				
General office,	11,298 66				
Engineering department,	11,141 29				
		25,889 95			
Rent, lighting and care of offices,		3,797 82			
Engineering: —					
Office supplies,	$1,081 79				
Automobile expense,	1,595 78				
		2,677 57			
Office supplies,		1,699 10			
Stationery and printing,		1,020 67			
Printing "Park Laws,"		367 15			
Telephones,		350 95			
Maps and books,		232 61			
Proportionate charges for steam,		35 00			
Recording papers and certified copies,		21 14			
Traveling,		17 97			
Physicians' services,		5 00			
			$215,020 00		
Blue Hills Reservation: —					
General labor,		$36,808 12			
Gypsy and brown-tail moth work: —					
Labor,	$36,125 82				
Supplies,	8,340 34				
		44,466 16			
Road repairs: —					
Labor,	$3,114 08				
Supplies,	779 10				
		3,893 18			
Amounts carried forward,		$85,167 46	$215,020 00		$596,000 00

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Amounts brought forward,		$85,167 46	$215,020 00	$596,000 00
Keep of horses,		4,603 00		
General supplies,		4,486 20		
Horses, carriages, automobiles, etc.,		1,306 56		
Water rates,		301 67		
Telephones,		295 45		
Physicians' services, etc.,		244 00		
Lighting buildings,		162 34		
Stationery and printing,		138 17		
Repairs,		114 40		
Shrubs,		101 25		
Express and freight,		49 76		
Stamps,		26 50		
			96,996 76	
Middlesex Fells Reservation: —				
General labor,	$27,785 64			
Teaming,	1,957 50			
		$29,743 14		
Gypsy and brown-tail moth work: —				
Labor,	$23,533 56			
Supplies,	2,971 33			
		26,504 89		
Road repairs, labor,		4,009 37		
General supplies,		7,053 77		
Keep of horses,		2,091 41		
Horses, carriages, automobiles, etc.,		2,060 33		
Lighting buildings,		377 65		
Telephones,		328 44		
Stationery and printing,		297 20		
Animals,		185 63		
Traveling,		101 02		
Repairs,		92 57		
Express,		85 53		
Water rates,		48 54		
Postage,		37 75		
Physicians' services,		26 00		
Flags,		18 50		
			73,061 74	
Revere Beach Reservation: —				
General labor,		$27,911 71		
Road repairs: —				
Labor,	$850 43			
Supplies,	94 74			
		945 17		
Street lighting,		5,229 82		
General supplies,		3,119 84		
Keep of horses,		1,442 97		
Horses, carriages, automobiles, etc.,		1,246 34		
Lighting buildings,		538 22		
Telephones,		443 00		
Water rates,		402 38		
Repairs,		226 36		
Stationery and printing,		178 36		
Traveling,		102 46		
Awning on shelters,		100 00		
Express and freight,		63 62		
Landscape architects,		46 91		
Stamps,		25 00		
Use of derrick,		6 00		
			42,028 16	
Amounts carried forward,			$427,106 66	$596,000 00

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Amounts brought forward,			$427,106 66	$596,000 00
Stony Brook Reservation: —				
General labor,	$3,183 74			
Teaming,	32 00			
		$3,215 74		
Gypsy and brown-tail moth work: —				
Labor,	$5,434 94			
Supplies,	2,029 50			
		7,464 44		
Road repairs: —				
Labor,	$1,108 46			
Supplies,	294 00			
		1,402 46		
Keep of horses,		795 05		
General supplies,		489 82		
Horses, carriages, etc.,		67 68		
Telephones,		38 52		
Water rates,		8 00		
			13,481 71	
Beaver Brook Reservation: —				
General labor,		$1,344 94		
Gypsy and brown-tail moth work: —				
Labor,	$319 13			
Supplies,	110 00			
		429 13		
Repairs,		437 90		
General supplies,		384 46		
Telephones,		49 01		
Landscape architects,		27 60		
Water rates,		15 95		
Lighting buildings,		9 85		
Express,		1 06		
			2,699 90	
Charles River Upper Division: —				
General labor,	$22,765 31			
Teaming,	3,078 50			
		$25,843 81		
Gypsy and brown-tail moth work: —				
Labor,	$5,623 84			
Supplies,	2,843 37			
		8,467 21		
Road repairs: —				
Labor,	$557 81			
Supplies and miscellaneous expense,	3,546 91			
		4,104 72		
General supplies,		3,978 21		
Street lighting,		3,767 71		
Horses, carriages, automobiles, etc.,		2,519 57		
Filling material,		2,379 05		
Lumber and shingles,		2,236 71		
Keep of horses,		1,689 83		
Repairs,		1,616 79		
Coal,		1,119 22		
Boats,		394 60		
Lighting buildings,		362 21		
Telephones,		360 49		
Shrubs,		322 87		
Stationery and printing,		246 60		
Water rates,		217 71		
Amounts carried forward,		$59,627 31	$443,288 27	$596,000 00

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Amounts brought forward,		$59,627 31	$443,288 27	$596,000 00
Fertilizer,		100 00		
Rubber hose,		91 34		
Rope,		79 04		
Cork buoys,		67 26		
Rugs,		48 53		
Bubbler fountain,		40 23		
Physicians' services,		37 00		
Traveling,		35 27		
Stamps,		32 00		
Express and freight,		30 74		
Anchorage pennants,		22 25		
Landscape architects' services,		2 40		
			60,213 31	
Riverside Recreation Grounds: —				
General labor,	$4,617 49			
Teaming,	168 50			
		$4,785 99		
General supplies,		2,940 45		
Repairs,		2,142 51		
Lighting buildings,		187 74		
Rental of sewer,		162 90		
Electric power,		118 30		
Telephones,		117 12		
Water rates,		80 00		
Horses, carriages, etc.,		28 52		
Freight and express,		16 12		
Physicians' services, etc.,		11 50		
Tuning piano,		10 00		
Use of pile driver,		8 00		
Stamps,		1 00		
			10,610 15	
Neponset River Reservation: —				
General labor,	$730 75			
Teaming,	92 00			
		$822 75		
Gypsy and brown-tail moth work, labor,		2,099 60		
Automobile expense,		211 86		
General supplies,		64 33		
Telephones,		46 27		
			3,244 81	
Mystic River Reservation: —				
General labor,	$11,993 52			
Teaming,	1,402 00			
		$13,395 52		
General supplies,		1,755 20		
Electric power,		187 50		
Telephones,		71 20		
Repairs,		31 35		
Street lighting,		27 10		
Water rates,		7 35		
Stationery and printing,		2 61		
Stamps,		1 00		
Express,		37		
			15,479 20	
Lynn Shore Reservation: —				
General labor,		$4,820 49		
Road repairs: —				
Labor,	$334 99			
Supplies,	107 36			
		442 35		
Amounts carried forward,		$5,262 84	$532,835 74	$596,000 00

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Amounts brought forward,		$5,262 84	$532,835 74	$596,000 00
Repairing sea wall: —				
Labor,	$3,009 26			
Supplies,	1,646 01			
		4,655 27		
Street lighting,		2,730 00		
Granolithic walks: —				
Labor,	$1,734 37			
Supplies,	400 79			
		2,135 16		
General supplies,		274 66		
Shrubs,		167 50		
Automobile expense,		104 85		
Keep of horses,		65 97		
Water rates,		35 00		
Buoys,		24 80		
			15,456 05	
Quincy Shore Reservation: —				
General labor,	$4,581 86			
Teaming,	949 00			
		$5,530 86		
Gypsy and brown-tail moth work: —				
Labor,	$180 25			
Supplies,	1,125 00			
		1,305 25		
Road repairs: —				
Labor,	$1,088 97			
Supplies,	1,375 00			
		2,463 97		
Street lighting,		2,251 16		
General supplies,		283 46		
Automobile expense,		264 94		
Water rates,		70 99		
Telephones,		48 83		
Lighting buildings,		18 77		
Repairs,		15 00		
Stationery and printing,		3 49		
			12,256 72	
Winthrop Shore Reservation: —				
General labor,		$1,356 04		
Road repairs: —				
Labor,	$204 75			
Supplies,	60 32			
		265 07		
Repairs to sea wall near Grover's Cliff: —				
Labor,	$1,254 91			
Supplies,	81 94			
		1,336 85		
Street lighting,		615 96		
General supplies,		279 53		
Covering boats,		70 00		
Automobile expense,		40 64		
Water rates,		9 50		
			3,973 59	
				564,522 10
Balance,				$31,477 90

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Special Appropriations.

Pensions.

Appropriation,		$7,041 25

Expenditures.

Elder pension,	$842 37	
Chamberlin pension,	695 58	
Armstrong pension,	667 43	
Kenney pension,	667 43	
Lord pension,	667 43	
Haddock pension,	638 75	
Harding pension,	600 00	
Stewart pension,	600 00	
Finn pension,	593 12	
Powers pension,	400 00	
Woodworth pension,	365 00	
Mateer pension,	300 00	
		7,037 11
Balance,		$4 14

Band Concerts.

Appropriation,		$30,154 99

Expenditures.

Blue Hills Division: —			
Bands,		$1,504 00	
Middlesex Fells Division: —			
Bands,		3,834 30	
Revere Beach Division: —			
Bands,	$10,296 35		
Lighting,	34 64		
		10,330 99	
Charles River Upper Division: —			
Bands,		2,685 40	
Charles River Lower Basin: —			
Bands,		522 50	
Nahant Beach Parkway: —			
Bands,		1,714 40	
Nantasket Beach Reservation: —			
Bands,		9,563 40	
			30,154 99
Balance,			$30,154 99

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System Maintenance.

Chapter 174, General Acts of 1919.

Appropriation,			$35,000 00

Expenditures.

Furnace Brook Parkway: —			
Construction,	$10,891 74		
Engineering services,	407 11		
		$11,298 85	
Nonantum Road extension: —			
Construction,	$9,446 72		
Engineering services,	419 60		
		9,866 32	
Mystic Valley Parkway: —			
Construction,	$9,127 73		
Engineering services,	147 05		
		9,274 78	
West Roxbury Parkway: —			
Construction,	$2,241 01		
Engineering services,	360 27		
		2,601 28	
Dedham Parkway: —			
Construction,	$1,347 00		
		1,347 00	
Winthrop Parkway: —			
Construction,	$483 83		
Engineering services,	29 27		
		513 10	
Grover's Cliff sea wall: —			
Engineering services,	$98 67		
		98 67	
			35,000 00
Balance,			-

Metropolitan Parks, Boulevard Maintenance.

Appropriation Dec. 1, 1918, to Dec. 1, 1919,			$368,069 66

Expenditures.

General expense: —			
Police: —			
Pay rolls,	$46,786 01		
Miscellaneous,	17,762 39		
		$64,548 40	
Salaries: —			
Commissioners,	$3,421 14		
General office,	11,090 90		
Engineering department,	9,867 45		
		24,379 49	
Rent, lighting and care of offices,		5,633 79	
Engineering: —			
Office supplies,	$642 13		
Automobile expense,	576 09		
		1,218 22	
Amounts carried forward,		$95,779 90	$368,069 66

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Amounts brought forward,		$95,779 90		$368,069 66
Office supplies,		934 36		
Stationery and printing,		871 93		
Telephones,		682 49		
Accountant,		198 50		
Maps and books,		196 11		
Traveling,		128 98		
Recording papers and certified copies,		12 56		
			$98,804 83	
Blue Hills Parkway: —				
General labor,	$3,576 28			
Teaming,	10 00			
		$3,586 28		
Gypsy and brown-tail moth work: —				
Labor,	$322 54			
Supplies,	891 00			
		1,213 54		
Road repairs: —				
Labor,	$1,697 72			
Supplies,	1,183 10			
		2,880 82		
Street lighting,		2,280 94		
General supplies,		537 32		
Horses, carriages, automobiles, etc.,		52 99		
Water rates,		19 19		
Traffic signs,		15 00		
Lighting buildings,		9 09		
Boiler inspection,		5 00		
Repairs,		4 25		
			10,604 42	
Middlesex Fells Parkway: —				
General labor,	$11,748 89			
Teaming,	3,468 48			
		$15,217 37		
Gypsy and brown-tail moth work, labor,		733 56		
Road construction and repairs: —				
Labor,	$5,806 64			
Supplies,	7,333 86			
		13,140 50		
Street lighting,		10,955 40		
General supplies,		1,429 81		
Horses, carriages, automobiles, etc.,		897 59		
Telephones,		82 62		
Shrubs,		60 00		
Water rates,		22 67		
Lighting buildings,		7 10		
Repairs,		5 75		
Advertising,		4 20		
Express,		3 19		
			42,559 76	
Mystic Valley Parkway: —				
General labor,	$11,725 84			
Teaming,	2,721 75			
		$14,447 59		
Gypsy and brown-tail moth work, labor,		1,001 09		
Road repairs: —				
Labor,	$5,668 62			
Supplies,	5,471 34			
		11,139 96		
Street lighting,		7,519 38		
General supplies,		2,503 85		
Amounts carried forward,		$36,611 87	$151,969 01	$368,069 66

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Amounts brought forward,		$36,611 87	$151,969 01	$368,069 66
Granolithic sidewalks,		1,122 25		
Horses, carriages, automobiles, etc.,		576 14		
Shrubs,		102 50		
Telephones,		80 14		
Physicians' services,		33 00		
Repairs,		21 75		
Water rates,		18 83		
			38,566 48	
Revere Beach Parkway: —				
Labor,	$19,518 31			
Teaming,	5,824 76			
		$25,343 07		
Gypsy and brown-tail moth work, labor,		432 36		
Road repairs: —				
Labor,	$1,345 64			
Supplies,	2,672 51			
		4,018 15		
Street lighting,		8,515 47		
General supplies,		1,730 92		
Cement,		1,717 46		
Filling material,		498 20		
Repairs,		445 68		
Horses, carriages, etc.,		368 91		
Power for draw,		337 20		
Shrubs,		276 00		
Tide-gate doors,		255 00		
Keep of horses,		40 35		
Water rates,		29 82		
Boiler inspection,		15 00		
Freight and express,		12 01		
Postage,		3 00		
Traveling,		2 39		
			44,040 99	
Neponset River Parkway: —				
General labor,		$1,021 80		
Gypsy and brown-tail moth work,		92 94		
Road repairs: —				
Labor,	$43 77			
Supplies,	132 30			
		176 07		
Horses, carriages, etc.,		257 38		
General supplies,		90 69		
			1,638 88	
Nahant Beach Parkway: —				
General labor,		$5,977 55		
Road repairs: —				
Labor,	$78 81			
Supplies,	81 52			
		160 33		
Street lighting,		1,090 83		
Keep of horses,		698 04		
General supplies,		339 62		
Horses, carriages, etc.,		76 67		
			8,343 04	
Fresh Pond Parkway: —				
General labor,		$1,495 07		
Gypsy and brown-tail moth work: —				
Labor,	$86 73			
Supplies,	45 19			
		131 92		
Amounts carried forward,		$1,626 99	$244,558 40	$368,069 66

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Amounts brought forward,	$1,626 99	$244,558 40	$368,069 66
Street lighting,	416 11		
General supplies,	14 37		
		2,057 47	
Furnace Brook Parkway: —			
General labor, $5,638 95			
Teaming, 627 00			
	$6,265 95		
Gypsy and brown-tail moth work: —			
Labor, $377 55			
Supplies, 891 00			
	1,268 55		
Road repairs: —			
Labor, $169 20			
Supplies, 426 30			
	595 50		
Street lighting,	2,437 19		
Automobile expense,	1,022 58		
General supplies,	535 78		
Water rates,	28 00		
Lighting buildings,	3 88		
		12,157 43	
Winthrop Parkway: —			
General labor,	$335 13		
Road repairs: —			
Labor, $23 92			
Supplies, 33 00			
	56 92		
Street lighting,	548 87		
General supplies,	41 63		
		982 55	
Lynnway: —			
General labor,	$5,983 75		
Road repairs: —			
Labor, $44 33			
Supplies, 121 23			
	165 56		
Building concrete walk: —			
Labor, $717 44			
Supplies, 318 86			
	1,036 30		
Power for lighting and operating draw,	466 88		
General supplies,	379 29		
Repairs,	367 30		
Street lighting,	210 00		
Automobile expense,	66 30		
Postage,	3 50		
Stationery and printing,	1 79		
Express,	79		
		8,681 46	
Lynn Fells Parkway: —			
General labor, $2,713 86			
Teaming, 225 00			
	$2,938 86		
Gypsy and brown-tail moth work, labor,	62 15		
Road repairs: —			
Labor, $287 04			
Supplies, 7 91			
	294 95		
Amounts carried forward,	$3,295 96	$268,437 31	$368,069 66

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Amounts brought forward,		$3,295 96	$268,437 31	$368,069 66
Street lighting,		2,048 95		
General supplies,		330 19		
Horses, carriages, automobiles, etc.,		111 84		
			5,786 94	
Middlesex Fells Roads: —				
General labor,	$807 52			
Teaming,	150 50			
		$958 02		
Road repairs: —				
Labor,	$9,838 12			
Supplies,	6,315 76			
		16,153 88		
Street lighting,		2,345 79		
Automobile expense,		686 28		
General supplies,		295 73		
Physicians' services,		46 00		
			20,485 70	
Alewife Brook Parkway: —				
General labor,	$8,641 65			
Teaming,	2,228 75			
		$10,870 40		
Gypsy and brown-tail moth work: —				
Labor,	$236 43			
Supplies,	44 00			
		280 43		
Road repairs: —				
Labor,	$2,604 28			
Supplies,	4,880 92			
		7,485 20		
Street lighting,		1,444 09		
Filling material,		593 29		
General supplies,		300 97		
Moving dredger,		139 00		
Shrubs,		112 88		
Cork buoys,		67 92		
Posts,		65 00		
Express,		1 74		
			21,360 92	
Woburn Parkway: —				
General labor,	$3,694 39			
Teaming,	646 45			
		$4,340 84		
Gypsy and brown-tail moth work, labor,		143 61		
Road repairs, labor,		25 71		
Street lighting,		1,496 16		
General supplies,		564 36		
Automobile expense,		216 76		
Water rates,		14 07		
Stationery and printing,		2 25		
			6,803 76	
West Roxbury Parkway: —				
Gypsy and brown-tail moth work, labor,		$428 23		
			428 23	
Hammond Pond Parkway: —				
General labor,		$1,593 48		
Gypsy and brown-tail moth work, labor,		2,209 60		
			3,803 08	
				327,105 94
Balance,				$40,963 72

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Charles River Basin Maintenance.

Maintenance of Parks and Water Areas.

Appropriation,			$114,126 38

Expenditures.

General labor,	$28,041 98		
Teaming,	60 00		
		$28,101 98	
Police: —			
Pay rolls,	$46,336 81		
Miscellaneous,	4,183 46		
		50,520 27	
Lighting,		4,211 90	
General supplies,		3,645 32	
Engine for boat,		1,365 00	
Lighting buildings,		1,157 82	
Horses, carriages, automobiles, etc.,		899 20	
Keep of horses,		851 53	
Repairs,		577 18	
Water rates,		411 82	
Telephones,		204 01	
Stationery and printing,		167 76	
Express and freight,		9 47	
Postage,		4 00	
Traveling,		3 46	
			92,130 72
Balance,			$21,995 66

Maintenance and Operation of Locks, Gates and Drawbridges.

Appropriation,			$73,022 09

Expenditures.

Labor, pay rolls,		$47,129 14	
Ice breaking: —			
Labor,	$2,111 73		
Supplies,	14,565 63		
		16,677 36	
Coal,		2,957 05	
Electric power,		1,355 89	
Repairs,		1,287 08	
General supplies,		1,105 23	
Lighting lock-gate houses and sluices,		696 48	
Heating,		281 80	
Automobile expense,		159 23	
Telephones,		156 54	
Motor for pump,		109 87	
Stationery and printing,		72 03	
Gasteam radiator,		48 00	
Services, tending diver,		30 00	
Physicians' services,		30 00	
Boiler inspection,		12 00	
Traveling,		6 10	
Water rates,		5 00	
Express,		3 09	
			72,121 89
Balance,			$900 20

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Nantasket Beach Maintenance.

Appropriation,			$63,770 00

Expenditures.

General labor,		$18,890 40	
Road repairs: —			
Labor,	$4,454 51		
Supplies,	3,306 40		
		7,760 91	
Police: —			
Pay rolls,	$16,928 62		
Miscellaneous,	4,617 85		
		21,546 47	
General supplies,		2,954 27	
Street lighting,		1,301 11	
Coal,		672 64	
Keep of horses,		664 32	
Water rates,		568 89	
Horses, carriages, automobiles, etc.,		540 45	
Rent,		420 00	
Installation of watchman's clock,		213 89	
Telephones,		173 49	
Freight and express,		99 89	
Stationery and printing,		89 27	
Repairs,		65 78	
Awnings recovered,		50 40	
Postage,		26 05	
Damage to truck,		25 00	
Traveling,		17 56	
Rent of drain pipe,		10 00	
Board of engineer,		5 57	
Advertising,		1 60	
			56,097 96
Balance,			$7,672 04

Wellington Bridge Maintenance.

Appropriation,			$14,582 96

Expenditures.

Labor,		$10,063 78	
Street lighting,		1,552 02	
General supplies,		685 71	
Repairs,		601 88	
Telephones,		87 17	
Postage,		3 00	
Stationery and printing,		1 79	
Express,		53	
			12,995 88
Balance,			$1,587 08

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Bunker Hill Monument Maintenance.

Appropriation,		$6,000 00
Expenditures.		
General labor,	$1,544 73	
Police, pay rolls,	998 55	
Repairs,	2,282 49	
General supplies,	601 94	
Engineering,	84 21	
Stationery and printing,	70 65	
Lighting buildings,	67 71	
Landscape architects,	25 00	
Advertising,	23 40	
		5,698 68
Balance,		$301 32

Metropolitan Parks Expense Fund.

Receipts Dec. 1, 1918, to Dec. 1, 1919.

Bath-houses: —		
Revere Beach, sale of bath tickets,	$34,043 20	
Nantasket Beach, sale of bath tickets,	17,049 80	
Nahant Beach, sale of bath tickets,	7,027 90	
Blue Hills, sale of bath tickets,	304 70	
		$58,425 60
Rentals: —		
Buildings,	$24,681 46	
Lunch stands and refectories,	2,169 34	
Roller-coaster and merry-go-round,	2,100 00	
Boathouse sites,	1,440 00	
Land,	1,366 57	
Street railway location,	1,246 48	
Day rentals, Riverside Recreation Grounds,	900 00	
Houses,	776 65	
Duct rentals,	687 99	
Boats,	599 80	
Automobile stands,	150 00	
Photographic stands,	125 00	
Gas main location,	100 00	
		36,343 29
Sales: —		
Piles,	$3,446 25	
Wood,	3,028 66	
Old metal, lumber, paper, etc.,	647 71	
Hay and grass,	372 50	
Mangle,	150 00	
Old buildings,	141 00	
Posts,	132 75	
Barrels,	112 80	
Vegetables,	89 50	
Sanitary napkins,	75 70	
Nursery stock,	75 09	
Launch engine,	75 00	
Lost articles,	71 34	
Old furniture,	45 00	
Flour,	39 10	
Amounts carried forward,	$8,502 40	$94,768 89

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Amounts brought forward,	$8,502 40	$94,768 89
Sales — *Con.*		
Coal,	11 70	
Plans,	10 51	
Tickets,	7 45	
Miscellaneous,	7 77	
		8,539 83
Court fines,		5,582 50
Income on money invested,		4,788 43
Steamer chair and umbrella privilege,		4,565 00
Sidewalk and entrance construction,		1,061 87
Light and water furnished,		487 14
Bags returned,		321 86
Admissions, Bunker Hill Monument,		233 80
Removal of garbage,		210 00
Pay closets,		141 27
Forfeited deposits,		128 00
Credits and refunds,		114 59
Iron fence,		100 00
Damages to property,		68 51
Money found,		51 84
Replaced keys and checks,		46 00
Telephone tolls,		40 68
Lost equipment,		40 54
Burro privilege,		35 00
Newspaper licenses,		35 00
Drain connection,		25 00
Miscellaneous,		13 51
		$121,399 26
Balance, Dec. 1, 1918,		138,503 86
		$259,903 12

Expenditures Dec. 1, 1918, to Dec. 1, 1919.

General expense: —		
Bridge over Ballard's Creek,	$1,282 29	
Landscape architects' services,	316 34	
		$1,598 63
Police: —		
Repairs, police boats,	$1,404 61	
Uniforms,	1,305 95	
Settlement of claims for damages,	92 23	
		2,802 79
Engineering: —		
Telephones,	$8 93	
		8 93
Blue Hills Reservation: —		
Repairs to buildings,	$99 34	
Uniforms,	78 43	
Boat checks,	26 12	
Advertising,	24 60	
Flags,	14 73	
Bath tickets,	95	
		244 17
Middlesex Fells Reservation: —		
Work on Woodland Road,	$992 96	
Lumber,	127 82	
Repairs to buildings,	116 69	
Amounts carried forward,	$1,237 47	$4,654 52

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Amounts brought forward,		$1,237 47	$4,654 52
Flags,		88 36	
Uniforms,		28 49	
			1,354 32
Revere Beach Reservation: —			
Bath-house: —			
Pay rolls,	$26,066 77		
Bathing suits,	3,675 60		
Coal,	3,330 74		
Lighting,	942 49		
Engine room,	372 70		
Stationery and printing,	280 36		
Water rates,	257 56		
Repairs,	230 29		
Bathing caps,	210 00		
Hardware,	204 29		
Ice,	169 95		
Paint,	161 21		
Soap, etc.,	127 14		
Keys,	114 60		
Towels,	110 40		
Flags,	104 94		
Findings,	73 71		
Lumber, etc.,	67 43		
Brooms and brushes,	60 96		
Tickets, etc.,	49 71		
Uniforms,	36 00		
Stockings,	35 28		
Sanitary napkins,	30 00		
Rent of typewriter,	24 00		
Telephones,	22 89		
Sheets,	22 38		
Blankets,	20 00		
Water cooler,	18 31		
Lunches,	16 40		
Medicines and attendance,	15 54		
Gauze,	11 49		
Drilling,	10 77		
Postage,	6 00		
Express,	5 87		
Combs,	3 75		
Miscellaneous,	5 80		
		$36,895 33	
Shelters,		2,592 18	
Repairs of damage by fire,		434 80	
Architect,		180 00	
Flags,		88 36	
Refund of money found,		32 54	
			40,223 21
Stony Brook Reservation: —			
Repairs to buildings,		$35 40	
			35 40
Charles River Upper Division: —			
Pump house,		$9,214 51	
Landscape architects,		101 00	
Water rates,		36 80	
Repairs to buildings,		32 30	
Flags,		29 46	
Architect,		10 00	
			9,424 07
Amount carried forward,			$55,691 52

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Amount brought forward,		$55,691 52
Mystic River Reservation: —		
Telephone tolls,	$0 05	
		05
Lynn Shore Reservation: —		
Repairs to sea wall,	$72 00	
Entrance construction,	47 40	
		119 40
Charles River Lower Basin: —		
Bridge over Ballard's Creek,	$5,248 55	
Water rates,	297 01	
Shoring walls,	107 00	
Uniforms,	78 45	
Flags,	58 91	
Repairs to drain,	30 72	
Telephone tolls,	75	
		5,821 39
Blue Hills Parkway: —		
Road repairs,	$3,578 77	
		3,578 77
Middlesex Fells Parkway: —		
Fence,	$293 85	
Entrance construction,	87 47	
Telephone tolls,	5 20	
		386 52
Mystic Valley Parkway: —		
Granolithic walks,	$107 88	
Landscape architects,	72 50	
Entrance construction,	21 75	
		202 13
Revere Beach Parkway: —		
Entrance construction,	$149 89	
		149 89
Nahant Beach Parkway: —		
Bath-house: —		
Pay rolls,	$5,537 71	
Bathing suits,	1,059 98	
Stockings,	542 32	
Lighting,	226 26	
Paint,	197 53	
Water rates,	181 65	
Repairs,	148 89	
Coal,	110 00	
Lumber, etc.,	79 55	
Bathing caps,	70 00	
Telephones,	65 55	
Hardware,	28 51	
Ice,	24 76	
Engine room,	20 59	
Uniforms,	14 00	
Flags,	12 65	
Wringers,	10 00	
Brooms,	9 40	
Soap, etc.,	7 75	
Gauze,	5 00	
Tape,	4 75	
Lungmotor parts,	4 61	
Postage,	3 00	
Bicarbonate of soda,	2 53	
Express,	50	
		8,367 49
Amount carried forward,		$74,317 16

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Amount brought forward,			$74,317 16
Winthrop Parkway: —			
Raising curbing,		$194 83	
			194 83
Alewife Brook Parkway: —			
Refund of amount deposited for teaming permit,		$1,000 00	
			1,000 00
Nantasket Beach Reservation: —			
Bath-house: —			
Pay rolls,	$11,829 78		
Repairs,	2,783 46		
Bathing suits,	2,037 82		
Coal,	1,797 20		
Water rates,	798 11		
Paint,	567 48		
Engine room,	299 28		
Ice,	230 94		
Soap, etc.,	184 95		
Toilet paper,	179 80		
Stationery and printing,	161 36		
Duck,	131 03		
Matting,	122 96		
Hardware,	109 64		
Bathing caps,	84 00		
Lighting,	79 02		
Motors for sewing room,	63 63		
Employees' suits,	60 00		
Telephones,	44 68		
Tape,	29 40		
Lumber, etc.,	28 85		
Neck bands,	22 50		
Findings,	21 83		
Flags,	14 73		
Dust brushes,	14 17		
Stepladder,	14 00		
Keys,	10 61		
Medicines and attendance,	9 33		
Metal polish,	5 58		
Keg for water cooler,	4 00		
Tickets, etc.,	3 92		
Employees' badges,	3 90		
Wringer,	2 82		
Brass checks,	1 20		
Disinfectant,	1 12		
		$21,753 10	
Repairs to buildings,		3,598 60	
Laying sewer pipes,		2,149 09	
Construction of cellar, new building,		1,297 45	
Architect's services,		1,047 36	
Cement,		897 50	
Bricks,		672 96	
Labor,		474 93	
Coal,		93 60	
Flags,		29 45	
Uniforms,		26 40	
			32,040 44
			$107,552 43

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Summary of General Expense for Year ending Nov. 30, 1919.

	Parks System Maintenance.	Parks Boulevard Maintenance.	Parks Expense Fund.	Parks Loan Fund.	Parks Loan Fund, Series II.	Totals.
Commissioners,	$3,450 00	$3,421 14	–	–	–	$6,871 14
Office salaries,	11,298 66	11,090 90	–	–	–	22,389 56
Engineering,	11,141 29	9,867 45	$8 93	–	–	21,017 67
Police,	178,905 07	64,548 40	2,802 79	–	–	246,256 26
Rent and care, Boston office,	3,604 41	5,480 03	–	–	–	9,084 44
Lighting, Boston office,	193 41	153 76	–	–	–	347 17
Miscellaneous,	6,427 16	4,243 15	–	–	–	10,670 31
Totals,	$215,020 00	$98,804 83	$2,811 72	–	–	$316,636 55

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Summary of Expenditures for Year ending Nov. 30, 1919.

	Metropolitan Parks Loan Fund.	Metropolitan Parks Loan Fund, Series II.	Metropolitan Parks System Maintenance.	Metropolitan Parks Boulevard Maintenance.	Metropolitan Parks Expense Fund.	Special Appropriations, Repairs, Construction and Investigations.	Band Concerts.	Totals.
Reservations: —								
Blue Hills,	–	–	$96,996 76	–	$244 17	–	$1,504 00	$98,744 93
Beaver Brook,	–	–	2,699 90	–	–	–	137 50	2,837 40
Charles River, Upper Division,	–	$1,192 41	60,213 31	–	9,424 07	$9,866 32	1,869 80	82,565 91
Lynn Shore,	–	–	15,456 05	–	119 40	–	–	15,575 45
Middlesex Fells,	–	–	73,061 74	–	1,354 32	–	3,834 30	78,250 36
Mystic River,	–	–	15,479 20	–	05	–	–	15,479 25
Neponset River,	–	–	3,244 81	–	–	–	–	3,244 81
Quincy Shore,	–	–	12,256 72	–	–	–	–	12,256 72
Revere Beach,	–	–	42,028 16	–	40,223 21	–	10,330 99	92,582 36
Riverside Recreation Grounds,	–	–	10,610 15	–	–	–	678 10	11,288 25
Stony Brook,	–	–	13,481 71	–	35 40	–	–	13,517 11
Winthrop Shore,	–	–	3,973 59	–	–	98 67	–	4,072 26
Weston Bridge,	–	–	–	–	–	–	–	–
General expense,	–	–	215,020 00	–	–	–	–	215,020 00
Totals,	–	$1,192 41	$564,522 10	–	$51,400 62	$9,964 99	$18,354 69	$645,434 81

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Parkways: —								
Alewife Brook,	–	–	–	$21,360 92	$1,000 00	–	–	$22,360 92
Blue Hills,	–	–	–	10,604 42	3,578 77	–	–	14,183 19
Dedham,	–	$140 05	–	–	–	$1,347 00	–	1,487 05
Fresh Pond,	–	–	–	2,057 47	–	–	–	2,057 47
Furnace Brook,	–	900 86	–	12,157 43	–	11,298 85	–	24,357 14
Hammond Pond,	–	–	–	3,803 08	–	–	–	3,803 08
Lynn Fells,	–	–	–	5,786 94	–	–	–	5,786 94
Lynnway,	–	–	–	8,681 46	–	–	–	8,681 46
Middlesex Fells,	–	–	–	42,559 76	386 52	–	–	42,946 28
Middlesex Fells Roads,	–	3,379 85	–	20,485 70	–	–	–	23,865 55
Mystic Valley,	–	1,582 55	–	38,566 48	202 13	9,274 78	–	49,625 94
Nahant Beach,	–	–	–	8,343 04	8,367 49	–	$1,714 40	18,424 93
Neponset River,	–	–	–	1,638 88	–	–	–	1,638 88
Old Colony,	–	33,428 27	–	–	–	–	–	33,428 27
Quannapowitt,	–	–	–	–	–	–	–	–
Revere Beach,	–	–	–	44,040 99	149 89	–	–	44,190 88
West Street, Braintree,	–	–	–	–	–	–	–	–
West Roxbury,	–	4,585 51	–	428 23	–	2,601 28	–	7,615 02
Winthrop,	–	17,307 00	–	982 55	194 83	513 10	–	18,997 48

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Summary of Expenditures for Year ending Nov. 30, 1919 — Concluded.

	Metropolitan Parks Loan Fund.	Metropolitan Parks Loan Fund, Series II.	Metropolitan Parks System Maintenance.	Metropolitan Parks Boulevard Maintenance.	Metropolitan Parks Expense Fund.	Special Appropriations, Repairs, Construction and Investigations.	Band Concerts.	Totals.
Parkways — *Con.*								
Woburn,	–	–	–	$6,803 76	–	–	–	$6,803 76
Neponset Bridge,	–	$55,080 85	–	–	–	–	–	55,080 85
General expenses,	–	–	–	98,804 83	$1,598 63	–	–	100,403 46
Totals,	–	$116,404 94	–	$327,105 94	$15,478 26	$25,035 01	$1,714 40	$485,738 55
Nantasket Beach Reservation,	–	–	–	–	32,040 44	56,097 96[1]	9,563 40	97,701 80
Wellington Bridge,	–	–	–	–	–	12,995 88[1]	–	12,995 88
Charles River Basin,	–	–	–	–	5,821 39	994 19[2] 164,252 61[1]	522 50	171,590 69
Bunker Hill Monument,	–	–	–	–	–	5,698 68[1]	–	5,698 68
Grand totals,	–	$117,597 35	$564,522 10	$327,105 94	$107,552 43	$275,039 32	$30,154 99	$1,421,972 13

[1] Maintenance. [2] Loan.

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